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ABSTRACT

Results of the first year's operation of EUREKA (a computerized system to provide current, accurate, and locally relevant labor market and educational information to California high school students and counselors for the purposes of career exploration and decision making) are presented in this report. The general project design is outlined: (1) modification of the Oregon Career Information System to make it usable in California; (2) the development of special materials for the California system; (3) the implementation of EUREKA in San Francisco Bay Area Schools, and especially in Richmond-area schools; (4) the creation of a board and users' consortium; and (5) the invitation to other non-profit schools and agencies to use the system. Implementation and evaluation of the program are traced briefly under the following headings: Accomplishments; Major Activities and Events; Problems; Publicity Activities; Dissemination Activities; Data Collection and Evaluation; Staff Employment and Utilization; and Staff Development. The major conclusion presented is that the success of the year's operation (114,000 users) warrants continued funding and support. The appendices, comprising one-half of the report, include a third-party evaluator's report, sample computer printouts, and a costs sheet, and a user handbook. (BL)

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ED145144

ANNUAL INTERIM REPORT

Project No. 07-61796-D-7-010

Grant No.

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EUREKA, The California Career Information System

Exemplary Project in Vocational Education

Conducted Under
Part D of Public Law 90-576

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1108 Bissell Avenue
Richmond, California 94802

June 1977

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June 30, 1977

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Summary of the Report

(a) Time period covered: September 1, 1976 - June 30, 1977

(b) Goal:

EUREKA, The California Career Information System, will provide current, accurate, and locally relevant labor market and educational information to California youths in the process of career exploration and decision-making so they can knowledgeably select careers and training opportunities appropriate to their needs.

Objectives:

1. By January 31, 1977, EUREKA will be fully operational in Richmond-area public and private non-profit high schools. This objective will be verified by an on-site survey conducted by the Project Director.

2. By January 31, 1977, every secondary school district in California will have been informed of EUREKA and invited to see the system demonstrated. This objective will be evidenced by copies of letters sent.

3. By January 31, 1977, EUREKA will be made available to all institutions which are represented by BACE members. This objective will be evidenced by BACE meeting minutes.

4. By January 31, 1977, the Richmond EUREKA staff will provide leadership in forming a statewide EUREKA consortium consisting of representatives from developers and users of system information. This objective will be evidenced by EUREKA consortium meeting minutes.

5. By March 15, 1977, EUREKA will be made available to California schools, institutions, and agencies interested in its implementation. This objective will be evidenced by materials in the EUREKA enrollment packet.

6. By June 30, 1977, a report evaluating EUREKA and its use in Richmond-area schools will be provided for the Career Education Unit of the California Vocational and Career Education Services Section. This objective will be evidenced by the evaluation report which is submitted.

(c) Results: Accomplishments

Because of this Part D Project, EUREKA, The California Career Information System, is a reality. Using simple commands at a computer terminal, 114,000 Californians can now access EUREKA's library of occupational and educational information which is localized and continuously updated.

(d) Evaluation

Users were overwhelmingly satisfied with EUREKA. The vast majority felt that the instructions were very easy to understand, that the handbook and printouts were very easy to read, and that the system was both very interesting and very helpful. The vast majority also gave the various parts of EUREKA the highest of ratings on a scale of one to three.

(e) Conclusions

Project EUREKA's success can best be measured by the interest it has generated in other schools and agencies. Whereas there are currently 114,000 EUREKA users, all of them in Northern California, next year there will be at least 250,000 users throughout California. Many people have benefited from this project already, but there are a great many more who still stand to benefit.

Recommendations

EUREKA as it exists today is by no means a finished product. To be sure, it is working and it is useful, but it lacks proprietary school information, certain California occupational files, much scholarship information, and extensive occupational localization, all of which characterize the good occupational and educational information systems and all of which can certainly be added.

EUREKA requires further development time and development funds before it can be considered mature and can sustain itself through user fees. Experience in other states which have adopted Oregon's Career Information System has shown that the system can mature in three years. As this report shows, EUREKA's first year has been most productive. It should be given two more years of VEA Part D support.

Body of the Report

(a) Accomplishments

(1) The problem area to which Project EUREKA was directed was identified as follows in the original proposal:

There is a lack of career and vocational direction in California schools, causing wasted years in school, and inadequate or erroneous information about the world of work. Information which is available is disorganized, outdated, and ineffectively disseminated to students by school counselors who can devote little time to vocational guidance and counseling.

This problem area was at least partially solved by Project EUREKA as follows:

EUREKA began to provide California youths with well-researched information about locally relevant occupations, preparation procedures, programs of training and apprenticeship, and post-secondary educational institutions so they are informed enough to make important career decisions.

System information is organized so that simple commands to the computer will yield whatever occupational and training information the user wants to access.

All newly updated information in the EUREKA files becomes available within eight weeks to all system users.

By explaining EUREKA to large numbers of students at one time, scheduling student use of computer terminals, and later reviewing the results individually, each counselor can provide adequate vocational guidance and counseling with minimum demands on the counselor's own time.

(a) Accomplishments (con't)

(ii) As finally delineated, the Project's goal and objectives were as follows:

EUREKA, The California Career Information System, will provide current, accurate, and locally relevant labor market and educational information to California youths in the process of career exploration and decision-making so they can knowledgeably select careers and training opportunities appropriate to their needs.

1. By January 31, 1977, EUREKA will be fully operational in Richmond-area public and private non-profit high schools. This objective will be verified by an on-site survey conducted by the Project Director.

2. By January 31, 1977, every secondary school district in California will have been informed of EUREKA and invited to see the system demonstrated. This objective will be evidenced by copies of letters sent.

3. By January 31, 1977, EUREKA will be made available to all institutions which are represented by BACE members. This objective will be evidenced by BACE meeting minutes.

4. By January 31, 1977, the Richmond EUREKA staff will provide leadership in forming a statewide EUREKA consortium consisting of representatives from developers and users of system information. This objective will be evidenced by EUREKA consortium meeting minutes.

5. By March 15, 1977, EUREKA will be made available to California schools, institutions, and agencies interested in its implementation. This objective will be evidenced by materials in the EUREKA enrollment packet.

(a) Accomplishments (con't)

6. By June 30, 1977, a report evaluating EUREKA and its use in Richmond-area schools will be provided for the Career Education Unit of the California Vocational and Career Education Services Section. This objective will be evidenced by the evaluation report which is submitted.

(iii) The Project's goal to establish EUREKA, The California Career Information System, was met as stated. EUREKA does provide current, accurate, and locally relevant labor market and educational information to California youths in the process of career exploration and decision-making so they can knowledgeably select careers and training opportunities appropriate to their needs.

Project EUREKA met each of its objectives as follows:

1. EUREKA was operational in Richmond-area public and private non-profit high schools but on a rotating basis, each site having unlimited access for a period of three weeks.

2. Virtually every secondary school and community college district in California was informed of EUREKA and invited to see a demonstration. Numberous demonstrations and workshops were conducted throughout California.

3. EUREKA was made available to all institutions which are represented by members of Bay Area Computer Educators (BACE). Every eight weeks the latest updated computer tape was shipped to each BACE site.

4. The EUREKA Board met on a monthly basis to discuss matters of concern to the development and dissemination of EUREKA. Minutes from the seven September-March meetings were included with the first two interim reports. Minutes from the April and May meetings are attached

(a) Accomplishments (con't)

as Appendix A. Minutes from the June meeting, scheduled for June 30, will not be ready in time for inclusion in this report.

5. As of March 1, EUREKA was made available to California schools, institutions, and agencies which did not participate in the original selection and development of the system. Two schools had the proper combination of decision makers, computer availability, and funding to adopt EUREKA immediately: Sacramento City College and Gavilan College. Others, like San Marino High School; St. Francis High School (Mt. View); the Southern California Regional Occupational Center; the Los Angeles Community College District; the Sacramento City Unified School District; U.C. Berkeley; Cal State Northridge; the Jewish Vocational Service, Los Angeles; the San Mateo County Schools Office; and Contra Costa County ROP, were working to adopt EUREKA by September of this year.

6. Interim quarterly reports evaluating EUREKA and its use in Richmond-area schools were provided in February and April for the Career Education Unit of the California Vocational and Career Education Services Section. This report serves as both the third quarterly interim report and the annual interim report.

The Richmond Unified School District does intend to apply for funds to continue Project EUREKA another year.

(b) Major Activities and Events

(1) The general project design for Project EUREKA included the following:

1. the Californiazation of the Oregon Career Information System, to make it usable in California;
2. the development of special materials for the California system;
3. the implementation of EUREKA in San Francisco Bay Area schools, and especially in Richmond-area schools;
4. the creation of a board and users' consortium; and
5. the invitation to other non-profit schools and agencies to use the system.

This design was carried out as follows:

1. The entire effort to transform Oregon's Career Information System into EUREKA, The California Career Information System, which would be usable anywhere in California, necessitated a division of labor and assignment of tasks among BACE members. It was done as follows:

   Richmond--localize occupational files; write, design, typeset, print, and distribute User Handbooks

   Diablo Valley College--perform all data entry tasks

   Palo Alto--localize program files; localize schools files

   Berkeley--localize preparation files

   San Francisco--input scholarship information

2. The 3000 copies of EUREKA's first handbook, which was written, edited, designed, typeset, printed, and distributed by the Richmond Project EUREKA staff, were exhausted by February. A new edition of some 7000 copies was readied for distribution to all EUREKA users in March. Incorporated in this new edition were certain changes to reflect the system's expanded user base; for example, all the California community colleges were included as was new localized program file information for Regional Occupational Programs. A copy of this

(b) Major Activities and Events (con't)

new User Handbook is attached as Appendix B.

3. To implement EUREKA in Richmond-area schools, Project Staff first held informational sessions for instructional vice principals, guidance counselors, and work experience counselors. Then, when the System became operational, Project Staff trained those involved at each site in the actual use of the System at a computer terminal. Project Staff provided BACE members at other San Francisco Bay Area sites using EUREKA with the materials to conduct their own implementation sessions.

4. The EUREKA Board consisted of the following:

Bill Banaghan, Contra Costa County Schools

John Buckham, Mills High School

LeRoy Finkel, San Carlos High School

Allan Jensen

Mary Koss, US Army Recruiting Command

Gerard Laureyns, US Army Recruiting Command

Paul Lorton, University of San Francisco

Eugene Muscat, San Francisco Unified Schools

Ernie Pope, Palo Alto Unified School District

Leigh Robinson, Richmond High School

Jim Stubblefield, Diablo Valley College

Bob Tryon, Berkeley High School

The minutes from EUREKA Board meetings are sent to all of the above and also to the following:

John Clyde, Oregon Career Information System

Leo Day, Independent Data Processing Center

Odessa Dubinsky, California Department of Employment Development

(b) Major Activities and Events (con't)

L. Donald Frazier, San Mateo High School District

Mary Griffin, Stanford

Robert Hotchkiss, California Employment Development Department

Pat Hubbard, Bay Area Cooperative Education Clearing House

Mitsu Kumagai, Santa Clara County Schools

Dr. Beth Lee, American River College

Donald Mayall, Career and Employment Analysis

Dr. Mary Lou Neasham, American River College

Jim Neto, California Employment Development Department

Herb Peckham, Gavilan College

Lt. Col. Joseph Shea, US Army Recruiting Command

Dr. Gary Strauss, Sacramento City College

Margaret Thal-Larsen, UC Berkeley Emeritus

Glenn Vaughan, Santa Clara County Schools

To assure the permanence of EUREKA when project monies are no longer available for sustenance, the Board wrote, amended, and finally adopted the EUREKA Constitution on February 17, 1977. A copy of this Constitution was attached to the second quarterly interim report. The By-Laws have been written and will be acted upon at the June 30th Board meeting.

The Board scheduled the first meeting of the EUREKA Users' Consortium for May, 1978.

5. Project Staff conducted numerous dissemination and publicity activities as referred to in later sections of this report.

(c) Problems

(I) The timeline for implementing EUREKA in all the Richmond Unified School District's secondary schools had to be adjusted because of computer programming problems.

Although it was written in the Dartmouth BASIC computer language, the Oregon Career Information System, which served as the model for EUREKA, would not run on Richmond's instructional computer center hardware, a Digital Equipment Corporation PDP-11. To solve this problem for the short term, Project staff exchanged program access for computer access at the local community college. This arrangement made one computer port available for all Richmond-area schools, which then had to be scheduled on a rotating basis. To solve the problem of hardware incompatibility for the long term, Project staff contracted with the Oregon Career Information System to have a translator program written for running EUREKA on the PDP-11. This translator, which will be completed July 15, 1977, doubles the potential users for EUREKA in California because the PDP-11 is widely used in high schools and colleges throughout the state.

(II) EUREKA Project staff had not anticipated the overwhelmingly favorable reception of its efforts to localize the Career Information System for California. The demands on staff time for dissimination resulted in less time being available for development of EUREKA's data files. And, of course, with new sites becoming interested in using the system, there must be even more development of localized files. For example, all the Southern California community colleges have now been added to the system because of interest among Southern California educators. The EUREKA Project consequently needs more funds and more staff.

(c) Problems (con't)

The lack of a full-time information-development staff to increase EUREKA's occupations from 230 to 400 has been a major problem. A system which purports to reflect the occupational distribution in California should surely have more than 230 occupations in its files. Project staff recognize this problem as do some users, but the funds simply haven't been available to increase the number of occupations.

(d) Publicity Activities

(I) The Project EUREKA presentation before the Richmond Unified School District's Board of Education on February 9th resulted in a newspaper article in the Richmond Independent/Berkeley Gazette, a copy of which is attached as Appendix C.

In addition to this published article, it should be mentioned here that the Project Co-ordinator was interviewed about EUREKA on the Community Closeup program broadcast over Radio Station KNBA-Vallejo, November 3, 1976.

(II) The EUREKA Project at Richmond High School was visited on 16 occasions by 130 people as follows:

11/16	Demonstration for Sacramento City Schools (4)*
12/1	Demonstration for Richmond Employment Development Department (12)
12/6	Demonstration for Marin County Schools (2)
1/4	Demonstration for Salesian High School VicePrincipal
1/5	Presentation/demonstration for Richmond Unified School District's Vice Principals (12)
1/14	Demonstration for Roland Boldt, State VEA and Dick Wenstrum, District VEA
1/26	Presentation/demonstration for RUSD counseling chairpeople (12)
2/9	Presentation for the RUSD School Board
3/2	Informational visit by Suzanne Köehn, Coordinator of Career Programs and Information, Career Planning and Placement Center, UC Berkeley
3/9	Informational visit by Vic Hutchins, CSD, Berkeley and Tim Arinson, Lawrence Hall of Science
3/30	Informational visit by Phil Brutcher, Standard Oil Education Coordinator
3/31	Informational visit by Hartley Campbell, Educator Program Coordinator, Headquarters for the US Army Recruiting Command, Ft. Sheridan, Illinois

* Numbers in parenthesis are approximate counts of people involved.

(d) Publicity Activities (con't)

5/6 Presentation/demonstration for Orange Unified School District Career Education Deliver System, Northern California Workshop (40)

5/18 Informational visit by College Park High School Counselors (2)

6/7 Informational visit by Dublin High and Foothill High School Counselors (3)

(e) Dissemination Activities

(1) A complete list of those who were sent the EUREKA informational letter was included in the first quarterly interim report. It is too lengthy to repeat here.

Informational packets consisting of a User Handbook, (see Appendix B), a System explanation sheet, (see Appendix D), sample computer printouts, (see Appendix E), and a costs sheet (see Appendix F) were sent to the following at their request:

Robert Argo, Sacramento City Unified School District

Don Bender, Grossmont Union High School District

Marc Berkov, East Los Angeles College

Lee Berman, Lawrence Hall of Science

Virginia Black, San Luis Obispo Community College District

Dr. Tom Bogetich, Vocational Education Council

Jack Bond, Cuesta College

Harold J. Brenner, Los Angeles City Unified School District

Johney Brooks, Pomona Unified School District

Walt Brooks, Shasta College

Elaine Burns, College of San Mateo

Alan Button, Digital Equipment Corporation

Herb Cohen, Long Beach City College

Rich Coker, Yolo County Schools

Joe Cooney, San Mateo County Office of Education

Leigh Croskrey, Tustin Unified School District

Robert B. DeWeese, Monterey Peninsula Unified School District

Paul DeWitt, Newark High School

Odessa Dubinsky, California EDD

Vern Dwelly, Cordova Senior High School

(a) Dissemination Activities (con't)

Harriet Glickman, UCLA Extension

Arthur Glover, West Los Angeles College

Polly Hammonds

Leonard C. Harlow, Champlain Valley Work & Training Programs, Inc.

Edward Hascall, San Francisco State University

Guinnevere A. Hodges, Compton Community College

Steve Iverson, Fairfield-Suisun Unified School District

David W. Jordan, El Camino College

Bob Kresek, Hewlett-Packard

Virla Krotz, State Board of Education

James S. Loughridge, Woodland Joint Unified School District

Natalie Maikovich, Santa Rosa City Schools

Robert A. Mantovani, Long Beach City College

Jean McIlyar, Arcadia High School

Wilma McLeod, Southwestern College

David Nashelsky, San Jose Public Library

Mike Navone, Mt. Diablo School District

Jim Neto, California EDD

Betty Owens, Orland High School

Evelyn Pollard, Santa Rosa Junior College

Jane Reece, Spartanburg Technical College, South Carolina

John Rice, KQED Television

Hal Roach, Cerritos College

Ann Roberti, City College of San Francisco

Maria Robinson, San Jose Unified School District

Fred Rusk, Rohnert Park High School

Stuart J. Silver, Beverly Hills High School

Siskiyous, College of the

(e) Dissemination Activities (con't)

Gary Straus, Sacramento City College

Patricia Wenz, Santa Barbara High School

(11) The following is a list of presentations made by Project Staff outside the Project site:

11/17 Presentation/demonstration for the National Alliance of Businessmen Career Guidance Institute - Hilltop Shopping Center, Richmond (125) *

11/19 Presentation/demonstration for the Northern California Community College Counselors' Association Mini-Conference - Hilton Inn, Oakland (200)

12/3 Presentation/demonstration for the Northern California ROP/C Counselor Career Center Technician Workshop - County Office of Education, Sacramento (75)

12/13-12/14 Presentation/demonstration for the American Personnel and Guidance Association Career Information System Workshop - Los Angeles County Board of Education Building, Downey (80)

1/6 Presentation/demonstration for the Apostolic Christian Academy staff - El Sobrante (5)

2/2-2/4 Booth and workshop/presentation at the Third National Forum on Education and Work, sponsored by the National Institute of Education and The Center for Vocational Education at Ohio State University - Hyatt Regency, San Francisco (40)

2/16 Presentation/demonstration for Lawrence Hall of Science personnel - LHS, Berkeley (2)

2/22 Workshop for Los Angeles-area educators - Glendora Unified School District Office (35)

2/23 Workshop for San Diego-area educators - San Diego County Department of Education (30)

2/24 Workshop for Los Angeles-area community college staff - Los Angeles City College (60)

2/24 Demonstration for San Marino and Pasadena secondary school staff - San Marino High School (10)

2/25 Workshop for Fresno-area educators - Fresno City College (25)

3/10 Presentation/demonstration for the North Santa Clara County ROP Counselor Inservice Workshop - Palo Alto (45)

* Numbers in parenthesis are approximate counts of people involved.

(e) Dissemination Activities (con't)

3/18 Presentation/demonstration for the Southern California Regional Occupational Center's participating schools - Torrance (17)

3/29 Presentation/demonstration for the Department of Education - Sacramento (12)

3/30 Presentation/demonstration for the UC Berkeley Career Planning and Placement Center - UC Berkeley (15)

5/12 Presentation/demonstration for Santa Ana College staff - Santa Ana College (15)

5/13-5/14 Table topics sessions at the California Association of Work Experience Educators' Workshop - Sheraton, Anaheim (135)

5/17 Presentation/demonstration for the Stockton Schools staff - Franklin High School, Stockton (15)

(f) Data Collection and Evaluation

(i) To substantiate claims regarding the participation of a private non-profit school in the Project, and regarding the interest that has been generated in EUREKA throughout California, there is a sampling of letters attached as Appendix G.

To measure user responses to EUREKA, a single-page questionnaire was designed that enables users to comment on their reactions to the system as a whole and to each part. A blank questionnaire is attached as Appendix H.

The results of these questionnaires were overwhelmingly positive. Table 1 shows user ratings for the individual EUREKA components. Especially noteworthy in this table is the "great" rating giving the Occupational Descriptions file by 77% of the respondents. This file was accessed by more users than any other, a total of 93% in all, so the enthusiastic response is certainly meaningful.

Table 2 shows how users reacted to their experience with the total system. Two of their most positive responses, that EUREKA was very easy to read (83%) and that it was very interesting (84%), substantiate the Project staff's original reasons for selecting the Oregon Career Information System over the others available.

(ii) The third-party evaluator's report is attached to this report as Appendix I.

TABLE 1

EUREKA COMPONENT RATINGS

	Great	Fair	Poor	Did Not Use
QUEST	42%	36%	2%	20%
Occupational Descriptions	77%	15%	1%	7%
Bibliography	18%	21%	1%	60%
Preparation	59%	24%	1%	16%
Programs of Study and Training	43%	12%	1%	43%
Schools	28%	20%	5%	47%

TABLE 2

STUDENT USERS' EVALUATION

	9	10	11	12	Grad
Grade of Student	18%	12%	33%	36%	1%

	10	20	30	40	50
Time spent using terminals (in minutes)	24%	42%	18%	10%	6%

	Yes	No
Did you have an occupation in mind before using EUREKA?	84%	16%

	Yes	No
Do you have a better idea about what you'll do after high school now that you've used EUREKA?	77%	23%

	Very	Fairly	Not at all
How easy were EUREKA's instructions to understand?	69%	31%	
How easy was EUREKA to read?	83%	16%	1%
How interesting was EUREKA to you?	84%	16%	
How helpful was EUREKA to you?	60%	38%	2%

(g) Staff Employment and Utilization

There were no staff personnel changes during the period covered in this report, but the Project co-ordinator's percentage of involvement increased substantially from the anticipated 65% to nearly 90%. At least 60% of the co-ordinator's total involvement was devoted to administration and management activities.

(h) Staff Development

The EUREKA Project Co-ordinator, who is currently acting as the statewide EUREKA Administrative Director, attended both meetings held this year for Career Information System directors from throughout the United States.

The meeting held in Oregon, October 20-22, 1976, covered cooperation possibilities of statewide systems, long-range development concerns, promotional materials, exchange of file information, user materials, system design changes, and the creation of a CIS clearinghouse to coordinate various activities of statewide systems on a continuous basis.

The meeting held in Colorado, April 18-19, 1977, continued the discussion of CIS clearinghouse functions and agreed to pursue a variety of tasks cooperatively, tasks such as sharing promotional and user service materials, sharing hard copy or microfiche of each state's information files and suggesting changes to the QUEST access strategy.

The next CIS Directors' Meeting will be held in California, August 25-26, 1977.

Project staff conducted EUREKA inservice workshops for Richmond Unified School District counselors and instructional vice principals. The workshops concentrated on various implementation aspects of EUREKA including efficient scheduling, terminals use, file contents, and motivational approaches.

(I) Conclusion

There is no doubt but that this Project, more than any other single effort, has succeeded in establishing EUREKA as an easily accessible computer-delivered occupational and educational information system which is capable of serving the needs of Californians all around the state.

The effect which this Project has had on other schools and agencies in California can be seen in Table 3, which lists those sites currently using EUREKA, those sites which will begin using EUREKA in September, and those sites which have been considering EUREKA and may still adopt it in September.

EUREKA's success this year, as determined by the interest and enthusiasm of counselors, teachers, and administrators in adopting this system over any other available and determined also by the satisfaction of students in using it, should be followed up next year with continued VEA Part D support.

The primary responsibilities of this continued project would be the following:

1. Coordinate EUREKA implementation in RUSD
2. Coordinate statewide EUREKA board
3. Conduct EUREKA demonstration workshops
4. Conduct EUREKA inservice workshops
5. Publish EUREKA user handbooks
6. Publish and/or distribute EUREKA implementation handbooks
7. Publish EUREKA newsletter
8. Design and publish EUREKA posters
9. Initiate public relations contacts with the public media
10. Contract with Oregon CIS for technical assistance in information development and user services
11. Add more occupations to EUREKA's files
12. Extend occupational localization

TABLE 3

EUREKA SITES, CURRENT AND POTENTIAL

Current EUREKA Sites	Potential Users
Berkeley High School	3,300
Palo Alto Unified School District	4,500
Richmond Unified School District	10,000
San Francisco Unified School District	17,700
San Mateo Union High School District	31,400
Contra Costa College	9,600
Diablo Valley College	18,600
Gavilan College	2,300
Sacramento City College	13,400
Solano Community College	3,300
Additional EUREKA Sites (Beginning September, 1977)	
St. Francis High School, Mt. View	1,400
San Marino High School	1,300
San Mateo County School District	34,000
Cal State Northridge	27,700
Lawrence - Livermore	2,000
American River College	19,000
Cañada College	8,000
Santa Rosa College	7,000

TABLE 3 (con't)

EUREKA SITES, CURRENT AND POTENTIAL

Sites Where EUREKA Is Being Considered for Adoption	Potential Users
Merced Union High School	6,500
Sacramento City Unified School District	17,800
Stockton City Unified School District	6,500
Cabrillo College	9,000
Fresno County Schools	36,000
Consumnes River College	5,300
Glendale College	4,100
Los Angeles Community College District	133,700
Merced College	8,100
Napa College	5,600
San Joaquin Delta College	16,000
Santa Ana College	16,700
UC Berkeley	27,000
Jewish Vocational Service	500
Lawrence Hall of Science, Berkeley	2,500
Southern California ROC (33 high schools)	54,000

(I) Conclusion (con't)

13. Add more postsecondary schools, to include some proprietary schools
14. Develop scholarship information file
15. Duplicate and distribute EUREKA PDP-11 version
16. Provide EUREKA evaluation report

As this report shows, EUREKA's first year has been most productive. It should be given two more years of support.

APPENDIX A

EUREKA Meeting Minutes April 29, 1977 2 - 4:30 p.m. Richmond High School

Present: Bill Banaghan, John Buckhom, Mike Doggett, Allan Jonson, Mary Koss, Gerard Laureyns, Don Hayatt, Ernie Pope, Leigh Robinson, Jim Stubblefield

1. INTRODUCTIONS...Mary Koss introduced herself as representing Col. Shea and the San Francisco District Army Recruiting Command. Mike Doggett introduced himself as Mary's counterpart in the Los Angeles District. And Gerard Laureyns, familiar to everyone, explained the Army's interest in EUREKA by detailing the Army's efforts to provide career counseling before enlistment, during active duty, and prior to discharge.

2. REPORT ON STATE CIS DIRECTORS' MEETING...Jim and Leigh reported that they met with CIS directors from Colorado, Iowa, Minnesota, Oregon, and Washington in Boulder, Colorado, on the 17th and 18th of April. After one wasted day discussing such "givens" as "What is CIS?", the directors voted to form a consortium with the following five purposes:

   a. The Consortium will be formed to share common experiences, exchange ideas, use common products, and maximize the use of available resources in operating CIS-based services;

   b. Provide a basis for adopting CIS standards, cooperating in the solution of technical problems and developing the system further;

   c. Cooperate with others involved in delivering occupational information to establish national standards and to provide for education and public information;

   d. Participate in a united effort to identify, develop, enhance, and use various private and public sources of occupational and educational information and to encourage the commitment of resources to this effort; and

   e. Support the establishment of occupational information services and the commitment of resources to this effort.

   The initial CIS Consortium membership fee for July 1, 1977 - June 30, 1978, will be $2500, which includes the following agreed-upon clearinghouse activities:

   a. Publish a CIS newsletter.

   b. Coordinate further development of the Implementation Handbook and additional "recipes" for System use.

   c. Coordinate exchange and/or common production of user materials.

   d. Coordinate occupational coding.

   e. Coordinate system design changes and improvements.

   The directors heard several reports as follows: QUEST revisions being tested by Oregon; trademarking CIS; exploring legal liability problems; federal legislative developments, especially S.B. 170/1242; and the newly drafted technical specifications describing how the CIS operation system functions.

   The next CIS directors' meeting will be held at Diablo Valley College on the 23rd and 24th of June.

3. REPORTS ON WORKSHOPS, DEMOS, ETC...Jim said he gave a well-received presentation at the California Educational Computer Consortium Meeting in Sacramento on the 22nd...Leigh reported that he and Carlo Carr of RUSD Special Projects made a EUREKA presentation before a group of VEA, State Department of Education, and EDD people, April 29th...Jim and Leigh will be showing EUREKA at the California Association of Work Experience Educators' Convention, Anaheim-Sheraton Hotel, Friday, May 13 at 3:45 and Saturday, the 14th at 9 and again at 9:30.

4. PROJECTS UPDATE...Still no word on any of the three EUREKA projects submitted.

5. HARDWARE UPDATE...Jim announced that EUREKA now runs on the DEC 10 in fortran IV at Solano. Soon versions will be available for the CDC, Data General, Honeywell, IBM, and PDP 11 computers also...There are microcomputer possibilities, too, but they're still a ways off.

6. FEES...Leigh presented a two-tier pricing structure that was discussed, altered somewhat, and finally adopted. It will begin in July, 1978. The computer fee, which will cover production and distribution of tapes and discs, will be $250. The user fee will be 75¢ per estimated user for the first 3000 and 50¢ for each additional user. Included with user fees will be one user handbook for every three users and one recipe book per thousand users, as well as the other materials, privileges, and services. There will be a minimum user fee of $150 and a maximum determined by the number of terminals available to the general user population. The maximum number of estimated users per terminal will be 1500. For example, a college with 20,000 students and two accessible terminals would pay a user fee based on two terminals times 1500 estimated users or 3000 estimated users altogether, rather than 20,000 x 2/3 or 13,333 estimated users.

7. BY-LAWS COMMITTEE REPORT...Bill presented us with another of his "masterpieces," the By-Laws Draft One, which incorporates Allen's suggestions and is herewith made a part of these minutes. Bill solicited comments and suggestions and suggested that they be mailed to him before the next meeting, when the By-Laws will be discussed.

8. PARTY, MAY 14...Jim distributed maps (one attached) to Carol Johnston's house, 15 Halter Ct., Pleasant Hill, where the EUREKA bash will be held May 14, from 4 p.m. on. Carol's place has a pool, sauna, patio, and view for everyone's enjoyment, and Carol has promised to provide drinks, eats, music and a tasty cake decorated with the EUREKA logo. By May 9, if possible, let Wanda Esberg, Jim's secretary (685-1230), know if you're coming, and send your check for $7 per person made out to Carol Johnston to either Carol at her home address or to Wanda in care of the Counseling Dept., Diablo Valley College.

9. NEXT MEETING...In order to accommodate others interested in attending EUREKA Board Meetings and because Ernie's tired of Richmond's refreshments, it was decided that the next Board Meeting will be held at Mills High School, 400 Murchison Avenue, Millbrae, May 26, 2 p.m.

(Enclosed is a revised estimate of EUREKA's direct costs for a school with 1200 students which has no computer of its own.)

A Parliamentary Procedure. Board procedures shall be in conformance to Robert's Rules of Order (Revised).

B Terms of Board Members. The normal term of membership of a board member shall be three years. However, at such time as a seat becomes vacant before the term is completed and a new member is named, the new member shall be named to fill the unexpired period rather than a full three year term.

C Election of Consortium Members to the Board. Procedures for the election of representatives from the Consortium to the Eureka Board shall be adopted by the Board.

D Resignations. Resignation shall be recognized only by a written notice submitted to the Chair by the school, college or agency represented by the member. Such resignation shall be recorded in the minutes of the meeting immediately following receipt of the resignation.

E Removal of Member. A Board member will be removed from membership at such time as that member acquires two consecutive and unexcused absences from regular meetings of the Board, as determined by the Chairee. A member having three unexcused absences from regular Board meetings within one year shall be removed from membership. Any member having four absences from regular Board meetings within a one year period shall be removed from membership. The Secretary shall notify the individual removed from membership and the school, college, or agency represented by the former member of the action by the Board.

F Vacancies. Vacancies which occur shall remain vacant until the next annual election.

G Scheduling of Meetings. Regular meetings of the Board shall be scheduled for 2 P.M. on the {fourth Thursday} of each month. Other meetings may be held at the call of the Chairee or upon the request of three members of the Board.

H Annual Meeting. An annual meeting of the Board shall be held in the month of ??????? at which time there will also take place the annual meeting of the Consortium. For good and sufficient reason, the annual meetings may occur in a month other than ?????.

I Location of Meetings. The location of regular meetings shall be varied so as to share the inconvenience of travel among the members and to provide more equitable access to the Board by the members of the Consortium.

J Notice of Meetings. Notice of the time and location of each

regular meeting shall be provided to all Board members at least two weeks prior to the meeting. The time and location of all special meetings shall be provided to all Board members at least two weeks prior to the special meeting, together with an agenda of business to be conducted at the meeting.

K Attendance at Meetings. {All regular meetings of the Board shall be open to the public.} 2.{Attendance at Board meetings by individuals other than Board members, or designees of Board members shall be by Board invitation only.} 3. {????????}

L Policies, Rules and Regulations. Policies, rules and regulations of the Board may be adopted, revised, added to or ammended at any regular meeting of the Board by a majority vote of those members present. Proposed changes or additions shall be introduced not less than one regular meeting prior to the meeting at which action is recommended.

M Agenda of Meetings. The Chairee of the Board shall cause an agenda to be prepared and mailed to the Board and to all members of the Consortium at least ten days prior to the meeting.

N Committees. Advisory and other committees may be established by the Board when such action is consistent with the constitution and the By-Laws. {e.g. Membership Subcommittee, Audit Subcommittee, Planning Subcommittee, Advisory Comitee, etc.}.

O Quorum. A quorum of Board members shall be required for official action by the Board. A quorum shall consist of two thirds of the current Board membership.

P Voting. Each member of the Board shall be entitled to one vote. The concurance of a majority of the members present is required for Board action.

Q Absentee Ballotts. ??????

R Recording of Votes. The ayes and nays shall be taken by voice or ballott upon all propositions presented to the Board for action and the passage or non passage shall be recorded in the minutes of the Board.

S Non-Voting Participation. An absent member may designate an alternate to participate at a Board meeting as a non-voting representative.

T Organizational Meeting. At its first meeting subsequent to the annual meeting of the consortium and the election of members to the Board, the Board shall organize by electing the following officers: Chairee, Vice Chairee, Secretary, and Treasurer.

U The Responsibility of the Chairee. The Chairee, or in his absence the Vice Chairee shall chair all meetings of the Board, and shall

act for the Board in signing all contracts or agreements in which Eureka is a participant.

V Responsibility of the Treasurer. The Treasurer shall asure that all funds, property, and tangible rights of Eureka are inventoried and protected, that commonly accepted budgetary procedures are maintained, and that information of this nature is readily available to the Board and to the chief administrator on all income received and disbursements rade by Eureka. Further, the treasurer shall be responsible for the development of an annual financial report to be presented at the annual meeting of the Board.

W Responsibility of the Vice Chairee. In the absence of the Chairee, the Vice Chairee shall chair the official meetings of the Board and shall sign such documents as may be necessary to fulfill the action of the Board.

X Responsibility of the Secretary. The Secretary shall be responsible for maintaining the minutes of the Board and for conducting such correspondence between the Board and other agencies or individuals as shall be desirable.

Y Staff Support. The Board shall retain staff as needed. All staff shall be hired under contract.

Z Director. The chief administrator shall be the Director who shall be an employee of the Board, and shall be directly responsible to the Board through the Chairee.

AA Responsibilities of the Director. (A) The Director shall recommend policy and procedures to the Board regarding:

1. Election of members to the Board and election of Board officers.
2. Goals and objectives, activities, and priorities for action.
3. Budget development, pricing of services and products, solicitation of funding and other resources, contracts and agreements.
4. Purchasing, accounting, and inventory control.
5. Personnel recruitrent, salary schedules, job descriptions.
6. Representation of consortium members (agencies, schools, colleges) by individuals empowered to represent the Consortium members.
7. Reembursement for expenses of Board members and of staff in the fulfillment of their responsibilities to Eureka.
8. Minimizing the possiblity of conflict of interest.

(B) The Director shall:

1. Assist the Chairee in the scheduling of all regular and special meetings of the Board and the coordination of the annual meetings of the Board and the Consortium.

2. Assist the Board in the development of an annual plan.
3. Assist the Secretary in the maintenance of the minutes and correspondence of the Board.
4. Assist the Treasurer in the development of the annual budgetary report.
5. Serve as purchasing agent for the Board within policy and regulations approved by the Board.
6. Serve as the agent of the Board in the development of agreements and contracts for services, materials, licences, etc., between the Board and other agencies. The Board retains the responsibility for final approval or rejection of all such agreements.
7. Provide coordination of workshops, demonstrations, etc., when provided under the sponsorship of the Eureka organization.

BB Amendments. Changes in the By-Laws may be proposed by any member of the Board or of the Consortium. Proposed changes must be submitted to the Board at least one month prior to the meeting at which the amendment is to be considered by the Board. Approval of a majority of those Board members voting, a quorum being present, is required for passage.

CC Date of Adoption(s). These By-Laws are hereby adopted by the Eureka Board on this_____ day of _____1977, and shall become effective _____.

Presented for consideration April 29, 1977.
Bill Banaghan, Contra Costa County Superintendent of Schools Office

Present: Bill Banaghan, John Buckham, Dick Carey, LeRoy Finkel, Allen Jensen, Mary Koss, Gerard Lauwyns, Don Mayall, Emilo Pope, Leigh Robinson, John Rollin, Jim Stubblefield, Bob Tryon

1. REPORT ON CAMEE CONVENTION...Jim, Bob, and Leigh made workshop and table topics presentations at the California Association of Work Experience Educators' Convention held in Anaheim May 12 - 14. They distributed about 180 EUREKA packets consisting of the User Handbook, a cost sheet (the one included with last month's minutes), and a user/hardware sheet (copy enclosed). They felt for two reasons that EUREKA has finally "arrived": the inquiring policy makers are outnumbering the merely curious at presentations; other "systems," e.g. SEARCH and CRIS, are trying to hide EUREKA's costfalls.

   Other user sites which appear more promising since the user/hardware sheet was prepared are these: Stockton City Unified, UC Berkeley, Feather River, Fresno, and San Mateo County.

2. STATUS REPORT ON DATA ENTRY...Jim mentioned that only a gradual change will be noticeable in new EUREKA tapes between now and the end of June. Beginning in July, however, he will rehire all staff and proceed apace to gather and load new data so that September's version will be in good shape.

3. PROJECTS UPDATE...Jim indicated that his postsecondary education project is a virtual certainty now. The only uncertainty involves the exact date of disbursement.

   Because all VEA funding is still so unsettled, DVC's other project and the Richmond project are still in limbo.

   Dick Carey suggested that EUREKA's marketing include mention that districts consider using Title IV funds to implement EUREKA. Every district receives these funds and may spend them on guidance/counseling at its discretion.

4. FEE STRUCTURE...After buying new batteries for his calculator, Leigh figured the user-maximum-per-terminal figure of 1500 users discussed at the last meeting to be unrealistic. One terminal available for running EUREKA at a large community college, for example, would yield only $1125, and that one terminal could serve 4410 users if accessed by three students per hour, seven hours per day, and 210 days per year. If accessed by only two students per hour, six hours per day, and 180 days per year, one terminal could serve 2160 users. No one knows exactly how many will use one terminal, but since the purpose of this user-maximum-per-terminal figure is to offer a reasonable price alternative to large institutions, there's no reason to set the figures much lower than reasonable expectations of use.

   After discussion, the 2000 user-maximum-per-terminal was adopted.

   LeRoy suggested and then promised to produce a grid which would help prospective users determine software costs. The grid variables would be number of users and number of terminals.

5. BATCH QUEST CHANGE...In a communication sent to CIS Directors, The Colorado Career Information System (COCIS) proposed a change in batch QUEST making it easier to use and offering greater flexibility. Called Abbreviated QUEST, this mode allows the user to determine the question sequence and prints each question just as regular QUEST does, thereby avoiding the confusion in using equal signs and commas.

   While recognized as an improvement, Abbreviated QUEST was considered of low priority at this time.

6. BY-LAWS...There was some discussion about whether the EUREKA non-profit corporation would be required to have by-laws at all since the constitution is so detailed. Regardless of whether or not they would be required by law, it was felt that a smaller group should put the by-laws into a shape that the Board could act upon. Bill, John B., Allen, and Leigh volunteered to meet at Richmond High, 2 p.m., June 8, to work on the by-laws.

   Bill passed out copies of state and federal tax exemption applications which must be filled in order to gain non-profit status. These, too, it was felt, should be filled out by a smaller group, checked by an attorney, and then presented to the Board for action. Bill, Don, and Leigh volunteered to meet at Richmond High, June 15, to work on these papers and others related to the status of EUREKA as a non-profit corporation.

   Leigh mentioned that he would like to contribute a $100 honorarium toward forming the corporation, and Jim mentioned that he would do likewise with a $200 honorarium. The money could be used for legal fees, filing fees, or other related costs.

7. MARKETING STRATEGY FOR NEXT YEAR...EUREKA will try next year to be represented at the NCS and CPCA conventions, as well as at the California Community College Counselors' Association and Secondary School Administrators conferences. It will participate in workshops sponsored by the DVC Post-secondary Ed. Commission project, and it will make every effort to advise policy makers in districts which already have computer access. In addition, it will encourage efforts by demonstration sites to spread the good word.

8. USER MEETING...Although it was felt that two user meetings would be desirable next year, one in the late fall and one in the spring, only one meeting could be adequately prepared for; hence, one statewide user meeting will be convened next year in early May. Time, place, and order of business will be set later.

9. QUESTIONNAIRE...Attached is a copy of the user questionnaire, second edition. A version of this questionnaire which can be machine scored by DVC's new optical scanner will be used next year.

10. NEXT MEETING...Jim will host EUREKA's next Board Meeting at Diablo Valley College, June 30th, 2.p.m.

EUREKA

The California Career Information System

USER HANDBOOK

WHAT IS EUREKA, THE CALIFORNIA CAREER INFORMATION SYSTEM?

Basically, EUREKA is a library of occupational and educational information which is up-to-date and localized to the area where you live.

The information is stored in EUREKA's computer memory and you can get it by telling the computer just what you want to find.

This handbook will be your guide.

3777000

ARE YOU UNDECIDED ABOUT WHAT OCCUPATIONS TO EXPLORE?

If so, you can tell the computer some things about yourself and get lists of job titles to explore.

See QUEST* on page 2.

DO YOU ALREADY HAVE SOME OCCUPATIONS IN MIND?

That's great, because EUREKA has some of the most current information available in California about occupations. There's information on wages, working conditions, hiring requirements, job outlook in the area where you want to live, and ways to prepare for employment, as well as other more general career information.

See OCCUPATIONS on page 8.

DO YOU HAVE A FIELD OF STUDY IN MIND?

Good, you can find information about programs, courses, requirements, and degrees. You can even get a list of schools which have programs in your chosen field of study and learn about the careers that are related.

See PROGRAMS OF STUDY AND TRAINING on page 14.

ARE YOU CONSIDERING CERTAIN SCHOOLS OR COLLEGES?

If you are, you'll be happy to know that EUREKA has information about costs, admission requirements, programs of study, housing, and services.

See SCHOOLS on page 19.

ARE YOU LOOKING FOR A JOB RIGHT NOW?

Sorry, but EUREKA does not have information about current job openings. You will need to get that help elsewhere. You might ask a counselor or work experience coordinator, or you could check with your local Employment Development office or some other source of current job openings.

ARE YOU WONDERING HOW TO GET THE COMPUTER TO DO WHAT YOU WANT?

See INSTRUCTIONS on pages 24 and 25.

*QUEST is copyrighted by the University of Oregon and is used here by permission.

Pages 2-7, "QUEST," have been removed from this user handbook because of copyright.

★★★ OCCUPATIONS ★★★

These occupations are the major kinds of work found in California. Find the occupations you want to know about and note their code numbers. Then see instructions on pages 24 and 25.

1614 Accountants and Auditors
Actors and Actresses (see 9866 Performing Artists)
1136 Administrators, Education
1134 Administrators, Health Service
1138 Administrators, Public
Advertising Salespeople (see 7422 Business Services Salespeople)
8428 Aides, Social Service
8488 Aides, Recreation
3116 Aircraft Mechanics
Airline Pilots (see 6188 Pilots and Flight Engineers)
6126 Air Traffic Controllers
9824 Announcers, Radio and Television
3169 Appliance Repairers
1634 Appraisers and Underwriters
2316 Architects
4724 Artists, Commercial
9866 Artists, Performing
5966 Assemblers, Production
9868 Athletes, Professional
Attorneys (see 8432 Lawyers)
1614 Auditors, Accountants and
Automobile Body Repairers (see 5486 Body & Fender Repairers)
3112 Automobile Mechanics
7418 Automobile Salespeople

Baby Sitters (see 3456 Domestic Service Workers)
4324 Bakers
1642 Bank Tellers, Cashiers and
8184 Barbers
7852 Bartenders
Beauticians (see 8186 Cosmetologists)
5488 Blacksmith and Forge Shop Workers
5486 Body and Fender Repairers
5483 Boiler Makers, Structural Metal and
5944 Boiler Operators
1616 Bookkeepers
Box Boys (see 7134 Grocery Baggers)
4264 Bricklayers
5664 Broadcast Technicians
Building Maintenance Occs., See:
3422 Building Maintenance Workers
3456 Domestic Service Workers
3455 Janitors
3454 Room Cleaners
3422 Building Maintenance Workers
6152 Bulldozer Operators
6142 Bus and Taxi Drivers
7888 Bus Boys
Business Administrators (see 1142 Small Business Operators, 1132 Hotel and Motel Managers, 1138 Public Administrators, 1144 Business Executives)
1144 Business Executives
7422 Business Services Salespeople
1184 Buyers and Purchasing Agents

4586 Cabinetmakers
4348 Cannery Workers
7112 Car Loaders
4254 Carpenters
8416 Caseworkers
1642 Cashiers and Bank Tellers
Catskinners (see 6152 Bulldozer Operators)
4246 Cement Masons
7824 Chefs and Dinner Cooks
Chemists (see 2624 Physical Scientists)
8459 Child Care Workers
8122 Chiropractors
4516 Chokersetters
8436 Clergy
Clerical Occupations, See:
1616 Bookkeepers
1642 Cashiers and Bank Tellers
1416 Clerk Typists
1418 General Office Clerks
1412 Secretaries
1415 Shorthand Reporters
1414 Stenographers

1416 Clerk Typists
1418 Clerks, General Office
7484 Clerks, Sales
4442 Clothes Designers and Patternmakers
College Presidents (see 1136 Education Administrators)
8454 College Teachers, University and
4724 Commercial Artists and Designers
4328 Commercial Fishermen
7414 Commodities Salespeople
1686 Computer Operators
Computer Programmers (see 1684 Programmers & Systems Analysts)
4286 Construction Laborers
Construction Occupations, See:
4264 Bricklayers
4254 Carpenters
4246 Cement Masons
4286 Construction Laborers
4276 Floor Layers
4242 Painters
4244 Plasterers & Dry Wall Installers
4274 Plumbers
4222 Powdermen
4288 Railroad Laborers
4278 Roofers
1152 Construction Superintendents
7824 Cooks, Chefs and Dinner
7826 Cooks, Fry
8186 Cosmetologists
8414 Counselors
Court Reporters (see 1415 Shorthand Reporters)
Craftspeople (see 5982 Handcrafters)
Custodians (see 3455 Janitors)

Dancers (see 9866 Performing Artists)
Data Processing Occupations, See:
1686 Computer Operators
1688 Keypunch Operators
1684 Programmers and Systems Analysts
2366 Decorators and Designers, Interior
8176 Dental Assistants
8174 Dental Hygienists
8113 Dentists

4442 Designers, Clothes, and Patternmakers
2366 Designers and Decorators, Interior
4146 Designers, Floral
Diesel Mechanics (see 3114 Truck and Heavy Equipment Mechanics)
8116 Dietitians
3456 Domestic Service Workers
2364 Draftsmen
4464 Dry Cleaning Workers, Laundry and
4244 Dry Wall Installers, Plasterers and

2626 Earth Scientists
2318 Ecologists
Economists (see 2144 Social Scientists)
2176 Editors, Writers and
1136 Education Administrators
8458 Education Program Specialists
5626 Electricians and Electrical Repairers
Electricity and Electronics Occupations, See:
5664 Broadcast Technicians
5626 Electricians and Electrical Repairers
5686 Electronics Assemblers
5624 Linemen
5686 Electronics Assemblers
8456 Elementary and Secondary Teachers
2356 Engineering Technicians
2354 Engineers
6184 Engineers, Ship Officers and
1144 Executives, Business

4514 Fallers and Buckers
4168 Farm Laborers, Seasonal
4166 Farm Workers
4164 Farmers and Farm Managers
9426 Fire Fighters
Firemen, Powerhouse (see 5944 Boiler Operators)
Firemen, Railroad (see 6172 Railroad Engineers)
4126 Fish and Wildlife Specialists
4328 Fishermen, Commercial
7856 Flight Attendants
6188 Flight Engineers, Pilots and
4276 Floor Layers
4146 Floral Designers
Food Products Occupations, See:
4324 Bakers

- 4348 Cannery Workers
- 4328 Commercial Fishermen
- 4326 Meat Cutters

Food Service Occupations, See:

- 7852 Bartenders
- 7888 Bus Boys
- 7824 Chefs and Dinner Cooks
- 7856 Flight Attendants
- 7826 Fry Cooks
- 7884 Kitchen Helpers
- 7854 Waiters and Waitresses

4124 Foresters
4128 Forestry Technicians
5488 Forge Shop Workers, Blacksmith &
6158 Fork Lift Operators
5426 Foundry Workers
2174 Freelance Writers
7826 Fry Cooks
4584 Furniture Making Machine Operators

1418 General Office Clerks
Geologists (see 2626 Earth Scientists)
4538 Graders and Inspectors, Lumber
Graphic Arts Occupations, See:

- 4724 Commercial Artists and Designers
- 4734 Photographers
- 4766 Printing Production Occupations

7134 Grocery Baggers
4144 Groundskeepers and Gardeners
9476 Guards, Security

5982 Handcrafters
1134 Health Service Administrators
Health Service Occupations, See:

- 8184 Barbers
- 8122 Chiropractors
- 8186 Cosmetologists
- 8176 Dental Assistants
- 8174 Dental Hygienists
- 8113 Dentists
- 8116 Dietitians
- 1134 Health Service Administrators
- 2654 Health Technicians/ Technologists
- 8126 Health Therapists
- 8164 Licensed Practical Nurses
- 8166 Nurse Aides and Orderlies
- 8115 Optometrists
- 8124 Pharmacists
- 8112 Physicians
- 8117 Physician's Assistants
- 8162 Registered Nurses
- 2674 Sanitarians
- 8128 Speech & Hearing Specialists
- 8114 Veterinarians

2654 Health Technicians/Technologists
8126 Health Therapists
8128 Hearing Specialists, Speech and
3146 Heat & Cooling System Mechanics
Heavy Equipment Operators (see 6154 Operating Engineers)
Historians (see 2144 Social Scientists)
Hospital Administrators (see 1134 Health Service Administrators)
1132 Hotel and Motel Managers
Housekeepers (see 3456 Domestic Service Workers)
8174 Hygienists, Dental

Industrial Machinery Repairers (see 3142 Millwrights)
Industrial Truck Operators (see 6158 Fork Lift Operators)
2672 Inspectors, Quality Control
3186 Instrument Repairers
7416 Insurance Salespeople
2366 Interior Designers & Decorators

3455 Janitors
3184 Jewelers

1688 Keypunch Operators
7884 Kitchen Helpers

Laboratory Occupations, See:

- 2626 Earth Scientists
- 2654 Health Technicians/ Technologists
- 2656 Laboratory Testers
- 2644 Opticians
- 2624 Physical Scientists
- 2672 Quality Control Inspectors
- 2674 Sanitarians
- 2628 Soil Scientists

2656 Laboratory Testers
4286 Laborers, Construction
4168 Laborers, Seasonal Farm
2314 Land Use Planners
Landscape Occupations (see 4144 Groundskeepers and Gardeners)
4464 Laundry and Dry Cleaning Workers
9414 Law Enforcement Officers
8432 Lawyers
7164 Librarians
7166 Library Assistants
8164 Licensed Practical Nurses
5624 Linemen
1636 Loan Officers
Loggers, See:
4516 Chokersetters
4514 Fallers and Buckers
6156 Yarding & Loading Occs.
4538 Lumber Graders and Inspectors
Linotype Operators (see 4766 Printing Production Occupations)

5472 Machine Tool Operators
5464 Machinists
Maids, Room (see 3454 Room Cleaners)
7122 Mail Carriers
3422 Maintenance Workers, Building
Managers, See:
1152 Construction Superintendents
1136 Education Administrators
1134 Health Service Administrators
1132 Hotel & Motel Managers
1411 Office Managers
1186 Personnel Managers
1138 Public Administrators
8482 Recreation Program Directors
1162 Sales & Service Managers
1142 Small Business Operators
2332 Mathematicians and Statisticians
4326 Meat Cutters
3116 Mechanics, Aircraft
3112 Mechanics, Automobile
3146 Mechanics, Heat & Cooling System
Mechanics, Industrial (see 3142 Millwrights)
3114 Mechanics, Truck & Heavy Equipment
Medical Technologists (see 2656 Laboratory Testers)
1456 Messengers
5421 Metal Refining Occupations
Metal Working Occupations, See:
5488 Blacksmith and Forge Shop Workers
5486 Body and Fender Repairers
5426 Foundry Workers
5472 Machine Tool Operators
5464 Machinists
5421 Metal Refining Occs.
5422 Metalworking Patternmakers
5424 Molders
5468 Saw Filers & Tool Sharpeners
5484 Sheet Metal Workers
5483 Structural Metal and Boiler Makers
5462 Tool and Die Makers
5482 Welders
5422 Metalworking Patternmakers
Meteorologists (see 2626 Earth Scientists)
9436 Military Enlisted Personnel
1172 Military Officers
3142 Millwrights
Ministers (see 8436 Clergy)
9842 Models
8182 Morticians
1132 Motel Managers, Hotel and
5424 Molders
Musicians (see 9866 Performing Artists)

7124 Newspaper Carriers
Newspapermen (see 2176 Writers and Editors)
8166 Nurse Aides and Orderlies
8164 Nurses, Licensed Practical
8162 Nurses, Registered

Oceanographers (see 2626 Earth Scientists)
1692 Office Machine Operators
3164 Office Machine Repairers

1411 Office Managers
1172 Officers, Military
3126 Oilers
6154 Operating Engineers
2644 Opticians
8115 Optometrists

7126 Packers and Wrappers
4242 Painters
5926 Painters and Finishers, Production
4442 Patternmakers, Clothes Designers and
5422 Patternmakers, Metalworking
9866 Performing Artists
1186 Personnel Managers
5914 Petroleum Processing Occupations
8124 Pharmacists
4734 Photographers
2624 Physical Scientists
Physical Therapists (see 8126 Health Therapists)
8112 Physicians
8117 Physician's Assistants
Physicists (see 2624 Physical Scientists)
6188 Pilots and Flight Engineers
4528 Planer Mill Occupations
2314 Planners, Land Use
4244 Plasterers & Dry Wall Installers
4274 Plumbers
4552 Plywood Finishing Occupations
4554 Plywood Laborers
4548 Plywood Lay-Up Occupations
4524 Plywood Log and Block Handlers
Policemen (see 9414 Law Enforcement Officers)
Political Scientists (see 2144 Social Scientists)
Postal Clerks (see 7122 Mail Carriers)
4222 Powdermen
Powerhouse Firemen (see 5944 Boiler Operators)
Principal (see 1136 Education Administrators)
4766 Printing Production Occupations
8164 Practical Nurses, Licensed
5966 Production Assemblers
5926 Production Painters and Finishers
1154 Production Superintendents
9868 Professional Athletes

1684 Programmers and Systems Analysts
8418 Psychologists
1138 Public Administrators
1195 Public Relations Workers
4574 Pulp and Paper Workers
1184 Purchasing Agents, Buyers and

2672 Quality Control Inspectors

9824 Radio and Television Announcers
3168 Radio and T.V. Repairers
6174 Railroad Brakemen and Switchmen
1646 Railroad Clerks
6128 Railroad Conductors
6172 Railroad Engineers
4288 Railroad Laborers
7417 Real Estate Salespeople
1452 Receptionists
8488 Recreation Aides
8486 Recreation Leaders
8482 Recreation Program Directors
8162 Registered Nurses
3169 Repairers, Appliance
5466 Repairers, Body and Fender
3164 Repairers, Office Machine
3168 Repairers, Radio and T.V.
3118 Repairers, Small Engine
Reporters (see 2176 Writers and Editors)
1415 Reporters, Shorthand
4278 Roofers
3454 Room Cleaners
7434 Routemen
5918 Rubber and Chemical Processing Occupations
5924 Rubber and Plastics Fabricators

1162 Sales and Service Managers
7484 Sales Clerks
7418 Salespeople, Automobile
7422 Salespeople, Business Services
7414 Salespeople, Commodities
7416 Salespeople, Insurance
7417 Salespeople, Real Estate
7415 Salespeople, Securities
7454 Salespersons
2674 Sanitarians
5468 Saw Filers and Tool Sharpeners
4534 Sawmill Drying Occupations
4536 Sawmill Greenchainmen
4559 Sawmill Laborers
4522 Sawmill Log Handling Occupations

4532 Sawmill Sawing Occupations
4542 Sawmill Waste Recovery Occs.
School Superintendents (see 1136 Education Administrators)
2624 Scientists, Physical
4446 Seamstresses and Tailors
4168 Seasonal Farm Laborers
1412 Secretaries
7415 Securities Salespeople
9476 Security Guards
3124 Service Station Attendants
5946 Sewage Plant Operators
4448 Sewing Machine Operators
5484 Sheet Metal Workers
6184 Ship Officers and Engineers
7116 Shipping and Receiving Clerks
4496 Shoe Repairers
1415 Shorthand Reporters
1142 Small Business Operators
3118 Small Engine Repairers
2164 Social Program Planners
2144 Social Scientists
8328 Social Service Aides
8424 Social Service Specialists
Sociologists (see 2144 Social Scientists)
Social Workers (see 8416 Caseworkers)
2628 Soil Scientists
Soldiers (see 9436 Military Enlisted Personnel)
8128 Speech and Hearing Specialists
Spotters (see 4464 Laundry and Dry Cleaning Workers)
2332 Statisticians, Mathematicians and
1414 Stenographers
Stewards and Stewardesses (see 7856 Flight Attendants)
7118 Stock Clerks
5483 Structural Metal and Boiler Makers
1152 Superintendents, Construction
1154 Superintendents, Production
1684 Systems Analysts, Programmers and

4446 Tailors, Seamstresses and
6142 Taxi Drivers, Bus and
1422 Teacher Aides
8456 Teachers, Elementary & Secondary
8454 Teachers, University and College
3166 Telephone Installers-Repairers
1454 Telephone & Telegraph Operators
9824 Television Announcers, Radio and
3168 Television Repairers, Radio and
4424 Textile Machine Operators
8126 Therapists, Health
5462 Tool and Die Makers
Tractor Operators (see 6152 Bulldozer Operators)
Transportation Occupations, See:
6126 Air Traffic Controllers
6152 Bulldozer Operators
6142 Bus and Taxi Drivers
6158 Fork Lift Operators
6154 Operating Engineers
6188 Pilots & Flight Engineers
6174 Railroad Brakemen and Switchmen
6128 Railroad Conductors
6172 Railroad Engineers
6184 Ship Officers and Engineers
6144 Truck Drivers
6156 Yarding and Loading Occupations
3114 Truck and Heavy Equipment Mechanics
6144 Truck Drivers

1634 Underwriters, Appraisers and
8454 University and College Teachers
4494 Upholsterers
Urban Planners (see 2314 Land Use Planners)

4544 Veneer Drying Occupations
4526 Veneer Production Occupations
4546 Veneer Salvage and Upgrading Occupations
8114 Veterinarians

7854 Waiters and Waitresses
7114 Warehousemen
Watchmen (see 9476 Security Guards)
5482 Welders
4126 Wildlife Specialists, Fish and
4556 Woodworking Machine Operators
2176 Writers and Editors
2174 Writers, Freelance

6156 Yarding and Loading Occupations

★★★ PROGRAMS OF STUDY AND TRAINING ★★★

The computer contains information on many kinds of educational and training programs. Some are intended to prepare people for certain occupations; others are not. Some are conducted in schools and called college majors; others are conducted on the job.

Find the programs you want to know about and note their code numbers. (Remember that this list covers educational information. The occupational list is on page 8.)

Then see the instructions on pages 24 and 25.

157 Accounting
145 Administration, Business Management and
231 Administration, Education
351 Administration, Medical Records
562 Administration, Public
633 Adult Basic Education
Adult Education Programs, See:
633 Adult Basic Education
631 Apprenticeship Programs
634 Division of Continuing Education
635 Regional Occupational Programs
Advertising (see 193 Journalism)
061 Agriculture
065 Agriculture Technology
Agriculture and Natural Resources Programs, See:
061 Agriculture
065 Agriculture Technology
067 Fisheries and Wildlife Sciences
063 Food Science and Technology
068 Forestry
069 Forestry Aide Programs
297 Air Conditioning Mechanic Training, Refrigeration and
Airplane Maintenance (see 275 Aviation Maintenance)
174 Animal Grooming and Training
582 Anthropology
315 Apparel Design
Appliance Repair (see 297 Refrigeration & Air Conditioning Mechanic Training)
631 Apprenticeship Programs
081 Architecture
111 Area Studies
311 Art
Arts, Fine and Applied Programs, See:
311 Art
319 Modeling and Finishing
314 Music
317 Photography
318 Printing/Graphics
316 Theatre and Drama
522 Astronomy
151 Auditing, Income Tax
278 Auto and Diesel Mechanic Programs
281 Auto Body Repair
275 Aviation Maintenance

143 Banking and Finance
167 Barber Training
633 Basic Education, Adult
168 Beautician Training, Cosmetology and
131 Biology
281 Body Repair, Auto
Bookkeeping (see 157 Accounting)
154 Business Machine Operation
289 Business Machine Repair
145 Business Management and Administration
Business Programs, See:
157 Accounting
174 Animal Grooming and Training
143 Banking and Finance
167 Barber Training
154 Business Machine Operation
145 Business Management and Administration
163 Commercial Driver Training
168 Cosmetology and Beautician Training
152 Court Reporting
171 Floral Design
165 Food Service

169 Funeral Service
153 Furniture Upholstery Training
161 Hotel and Motel Management
151 Income Tax Auditing
144 International Business
146 Marketing
147 Real Estate Training
148 Sales Training
158 Secretarial Studies

Car Mechanics (see 278 Auto and Diesel Mechanic Programs)
Carpentry (see 288 Construction Industry Programs)
Chef or Cook Training (see 165 Food Service)
524 Chemistry
373 Chiropractic Training
City Planning (see 589 Urban Studies)
Clerk Training (see 158 Secretarial Studies)
163 Commercial Driver Training
191 Communications
Communications Programs, See:
191 Communications
193 Journalism
196 Radio and Television
443 Speech
Computer and Information Science Programs, See:
211 Data Processing
214 Keypunch
288 Construction Industry Programs
634 Continuing Education, Division of
568 Corrections
168 Cosmetology and Beautician Training
238 Counseling
152 Court Reporting

211 Data Processing
358 Dental Assistant Training
361 Dental Hygiene
362 Dental Technology
357 Dentistry
Design (see Fine and Applied Arts Programs)
278 Diesel Mechanic Programs, Auto and

634 Division of Continuing Education
Dog Grooming (see 174 Animal Grooming and Training)
277 Drafting
316 Drama, Theatre and
163 Driver Training, Commercial

583 Economics
411 Economics, Home
231 Education Administration
Education Programs, See:
633 Adult Basic Education
238 Counseling
231 Education Administration
239 Education Aide Programs
234 Elementary Education
232 Health Education
235 Physical Education
236 Secondary Education
237 Special Education
292 Electronics
234 Elementary Education
279 Engine Repair, Small
251 Engineering
253 Engineering Technologies
441 English and Literature
381 Environmental and Sanitation Technology
291 Equipment Operation and Repair, Heavy
588 Ethnic Studies

Farming (see 061 Agriculture, 065 Agriculture Technology)
Fashion (see 319 Modeling and Finishing, 315 Apparel Design, 311 Art)
143 Finance, Banking and
Fine and Applied Arts Programs, See:
315 Apparel Design
311 Art
319 Modeling and Finishing
314 Music
317 Photography
318 Printing/Graphics
316 Theatre and Drama
319 Finishing, Modeling and
569 Fire Control
067 Fisheries and Wildlife Sciences
274 Flight Training

171 Floral Design
063 Food Science and Technology
165 Food Service
331 Foreign Languages
068 Forestry
069 Forestry Aide Programs
169 Funeral Service
153 Furniture Upholstery Training

Game Management (see 067 Fisheries and Wildlife Sciences)
613 General Studies—Humanities
614 General Studies—Science
612 General Studies—Social Science
585 Geography
526 Geology
318 Graphics, Printing/

232 Health Education
387 Health—Other Technologies
376 Health, Public
Health Service Programs, See:
- 373 Chiropractic Training
- 358 Dental Assistant Training
- 361 Dental Hygiene
- 362 Dental Technology
- 357 Dentistry
- 381 Environmental and Sanitation Technology
- 387 Health—Other Technologies
- 383 Health Technologies—Medical Laboratory
- 385 Health Technologies—Radiological (X-ray)
- 368 Massage
- 366 Medical Assistant Training
- 351 Medical Records Administration
- 363 Medicine (MD)
- 353 Nursing
- 367 Occupational Therapy
- 369 Optometry
- 372 Pharmacy
- 374 Physical Therapy
- 376 Public Health
- 378 Veterinary Medicine

383 Health Technologies—Medical Laboratory
385 Health Technologies—Radiological (X-ray)
291 Heavy Equipment Operation and Repair
584 History
411 Home Economics
Horseshoeing (see 174 Animal Grooming and Training)
161 Hotel and Motel Management
613 Humanities, General Studies—
Humanities and Letters Programs, See:
- 441 English and Literature
- 584 History
- 445 Philosophy
- 446 Religious Studies
- 443 Speech

151 Income Tax Auditing

287 Industrial Mechanics Programs
288 Industry Programs, Construction
Insurance Training (see 148 Sales Training)
Interdisciplinary Studies Programs, See:
- 613 General Studies—Humanities
- 614 General Studies—Science
- 612 General Studies—Social Science

Interior Design (see 081 Architecture)
144 International Business

193 Journalism

214 Keypunch

383 Laboratory, Health Technologies—Medical
331 Languages, Foreign
421 Law
567 Law Enforcement
461 Library Science
441 Literature, English and

154 Machine Operation, Business
289 Machine Repair, Business
295 Machine Technologies
275 Maintenance, Aviation
145 Management and Administration, Business

Management and Business Programs (see Business Programs)
161 Management, Hotel and Motel
564 Management, Recreation and Park
146 Marketing
368 Massage
481 Mathematics
278 Mechanic Programs, Auto and Diesel
287 Mechanic Programs, Industrial
297 Mechanic Training, Refrigeration and Air Conditioning
Mechanical Drawing (see 277 Drafting)
Mechanical Technology Programs, See:
- 281 Auto Body Repair
- 278 Auto and Diesel Mechanic Programs
- 275 Aviation Maintenance
- 289 Business Machine Repair
- 288 Construction Industry Programs
- 277 Drafting
- 292 Electronics
- 274 Flight Training
- 291 Heavy Equipment Operation and Repair
- 287 Industrial Mechanic Programs
- 295 Machine Technologies
- 293 Radio-TV Repair
- 297 Refrigeration and Air Conditioning Mechanic Training
- 279 Small Engine Repair
- 283 Welding

366 Medical Assistant Training
383 Medical Laboratory, Health Technologies—
351 Medical Records Administration
363 Medicine (MD)
Meteorology (see 522 Astronomy)
Military Science (see 511 ROTC)
Minority Studies (see 588 Ethnic Studies)
319 Modeling and Finishing
314 Music

Natural Resources Programs, See:
- 067 Fisheries and Wildlife Sciences
- 068 Forestry
- 069 Forestry Aide Programs

353 Nursing

367 Occupational Therapy
528 Oceanography
On-the-Job Training (see 631 Apprenticeship Programs)
369 Optometry

Painting (see 288 Construction Industry Programs)
564 Park Management, Recreation and
372 Pharmacy
445 Philosophy
317 Photography
235 Physical Education
521 Physical Science
Physical Science Programs, See:
- 522 Astronomy
- 524 Chemistry
- 614 General Studies—Science
- 526 Geology
- 528 Oceanography
- 521 Physical Science
- 523 Physics

374 Physical Therapy
523 Physics
Pilot Training (see 274 Flight Training)
Plumbing (see 288 Construction Industry Programs)
Police Training (see 567 Law Enforcement)
586 Political Science
318 Printing/Graphics
Programming (see 211 Data Processing)
541 Psychology
562 Public Administration
Public Affairs and Service Programs, See:
- 568 Corrections
- 569 Fire Control
- 567 Law Enforcement
- 562 Public Administration
- 564 Recreation and Park Management
- 565 Social Service

376 Public Health

196 Radio and Television
293 Radio-TV Repair
385 Radiological (X-ray), Health Technologies—
147 Real Estate Training
351 Records Administration, Medical
564 Recreation and Park Management
297 Refrigeration and Air Conditioning Mechanic Training
635 Regional Occupational Programs
446 Religious Studies
281 Repair, Auto Body
289 Repair, Business Machines
291 Repair, Heavy Equipment Operation and
293 Repair, Radio-TV
279 Repair, Small Engine
152 Reporting, Court
511 ROTC

148 Sales Training
381 Sanitation Technology, Environmental and
Science Programs, Physical, See:
522 Astronomy
524 Chemistry
614 General Studies—Science
526 Geology
528 Oceanography
521 Physical Science
523 Physics
236 Secondary Education
158 Secretarial Studies
Shoe Repair (see 174 Animal Grooming and Training)
279 Small Engine Repair
581 Social Science
612 Social Science—General Studies
Social Science Programs, See:
582 Anthropology
583 Economics
588 Ethnic Studies
612 General Studies—Social Science
585 Geography
584 History
586 Political Science
581 Social Science
587 Sociology
589 Urban Studies
565 Social Service
Social Work (see 565 Social Service)
587 Sociology
237 Special Education
443 Speech

151 Tax Auditing, Income
196 Television, Radio and
293 Television Repair, Radio and
316 Theatre and Drama
367 Therapy, Occupational
374 Therapy, Physical
Training Opportunity Programs, See:
633 Adult Basic Education
631 Apprenticeship Programs
634 Division of Continuing Education
635 Regional Occupational Programs
Truck Driving (see 163 Commercial Driver Training)

153 Upholstery Training, Furniture
589 Urban Studies

378 Veterinary Medicine
Vocational Education (see 236 Secondary Education)

283 Welding
067 Wildlife Science, Fisheries and

385 (X-ray), Health Technologies—Radiological

★★★ SCHOOLS ★★★

EUREKA currently has in its files all of California's community colleges and public colleges and universities, as well as popular private colleges and universities in California and certain out-of-state schools.

Here's how to get information on those schools:

First, find the schools you want information about and note their code numbers. You may compare as many as three at a time.

Next, pick some school topics from the list on page 23. You may pick as many as you want, but be sure you note the code numbers.

Then, using the computer terminal, type in SCH and 1, 2, or 3 school codes. Here's an example: SCH 21143, 21001, 21024. (Put a comma between the numbers.)

After that, strike the Return Key and prepare to type in the numbers of the topics you picked.

CALIFORNIA COLLEGES AND UNIVERSITIES (PUBLIC)

21326 California Polytechnic State University, San Luis Obispo
21910 California State College, Bakersfield
21411 California State College, Chico
21512 California State College, Dominguez Hills
21722 California State College, San Bernardino
21227 California State College, Sonoma
21528 California State College, Stanislaus
21520 California State Polytechnic University, Pomona
21413 California State University, Fresno
21514 California State University, Fullerton
21015 California State University, Hayward
21116 California State University, Humbolt
21517 California State University, Long Beach
21518 California State University, Los Angeles
21519 California State University, Northridge
21221 California State University, Sacramento
21623 California State University, San Diego
21024 California State University, San Francisco
21125 California State University, San Jose
21001 University of California, Berkeley
21402 University of California, Davis
21503 University of California, Irvine
21504 University of California, Los Angeles
21105 University of California, Riverside
21606 University of California, San Diego
21007 University of California, San Francisco
21008 University of California, Santa Barbara
21309 University of California, Santa Cruz

CALIFORNIA COLLEGES AND UNIVERSITIES (PRIVATE)

21577 California Institute of Technology
21069 Claremont Men's College
21076 Harvey Mudd College
21068 Mills College
21578 Occidental College
21079 Pomona College
21080 St. Mary's College of California
21181 Stanford University
21382 University of the Pacific
21073 University of San Francisco
21183 University of Santa Clara
21572 University of Southern California

OUT-OF-STATE SCHOOLS

84602 Brigham Young University
02912 Brown University
02138 Harvard University
02139 Massachusetts Institute of Technology
21219 Oregon State University
08540 Princeton University
80302 University of Colorado
21812 University of Oregon
98195 University of Washington
80901 U.S. Air Force Academy
11024 U.S. Merchant Marine Academy
10996 U.S. Military Academy (West Point)
21402 U.S. Naval Academy (Annapolis)
99163 Washington State University
06520 Yale University

CALIFORNIA COMMUNITY COLLEGES

21035	Alameda, College of
21084	Allan Hancock College
21229	American River College
21585	Antelope Valley College
21986	Bakersfield College
21787	Barstow Community College
21430	Butte College
21331	Cabrillo College
21032	Canada College
21591	Canyons, College of the
21588	Cerritos College
22945	Cerro Coso Community College
21033	Chabot College
21789	Chaffey College
21590	Citrus College
21940	Columbia Junior College
21594	Compton Community College
21041	Contra Costa College
21242	Cosumnes River College
22746	Crafton Hills College
21395	Cuesta College
21596	Cypress College
21143	De Anza College
21792	Desert, College of the
21066	Diablo Valley College
21597	East Los Angeles College
21598	El Camino College
22144	Evergreen Valley College
21944	Feather River College
21145	Foothill College
21499	Fresno City College
22500	Fullerton Junior College
21346	Gavilan College
22501	Glendale College
22502	Golden West College
22603	Grossmont College
22304	Hartnell College
22805	Imperial Valley College
21067	Indian Valley Colleges
22943	Lake Tahoe Community College
21047	Laney College
21948	Lassen College
22506	Long Beach City College
22507	Los Angeles City College
22508	Los Angeles Harbor College
22542	Los Angeles Mission College
22509	Los Angeles Pierce College
22510	Los Angeles Southwest College
22511	Los Angeles Trade-Technical College
22512	Los Angeles Valley College
21049	Los Medanos College
21036	Marin, College of

CALIFORNIA COMMUNITY COLLEGES

22147	Mendocino College
21550	Merced College
21051	Merritt College
22613	Mira Costa College
21552	Modesto Junior College
22314	Monterey Peninsula College
22715	Moorpark College
22516	Mt. San Antonio College
22717	Mt. San Jacinto College
21253	Napa College
21055	Ohlone College
22518	Orange Coast College
22741	Oxnard College
22620	Palomar College
22719	Palo Verde College
22521	Pasadena City College
22048	Peralta College for Non-traditional Study
22622	Porterville College
21137	Redwoods, College of the
22423	Reedley College
22524	Rio Hondo College
22725	Riverside City College
21256	Sacramento City College
22526	Saddleback College
22727	San Bernardino Valley College
22628	San Diego City College
22629	San Diego Evening College
22630	San Diego Mesa College
22640	San Diego Miramar College
21034	San Francisco, City College of
21357	San Joaquin Delta College
21158	San Jose City College
21038	San Mateo, College of
22531	Santa Ana College
22032	Santa Barbara City College
22533	Santa Monica College
21259	Santa Rosa Junior College
21693	Sequoias, College of the
21960	Shasta College
21961	Sierra College
21939	Siskiyous, College of the
21062	Skyline College
21063	Solano Community College
22634	Southwestern College
22935	Taft College
22736	Ventura College
22737	Victor Valley Community College
22438	West Hills College
22539	West Los Angeles College
21164	West Valley College
21465	Yuba College

★★★ SCHOOL TOPICS ★★★

After entering school numbers, you will need to tell the computer what you want to know about the schools.

Note the topics you want information about and their code numbers. Then type in these code numbers and strike the Return Key.

Example: 1-5, 21, 71, 85

GENERAL INFORMATION

01 General Information (type of school, location, etc.)
02 Student Enrollment
03 Minority Student Enrollment
04 Student Enrollment by Age Group
05 Contact for More Information
71 Alternative Credit Opportunities
72 Size of Freshman Classes
73 School Graduation Requirements
74 Availability of Pass/Fail Grading

PROGRAMS OF STUDY
(lists types of programs offered)

06 Agriculture and Natural Resources
08 Architecture
11 Area Studies
13 Biological Sciences
14 Business & Management
19 Communications
21 Computer & Information Sciences
23 Education
25 Engineering
27 Mechanical Engineering Technologies
31 Fine and Applied Arts
33 Foreign Languages
35 Health Services
41 Home Economics
42 Law
44 Letters (English, Philosophy, Speech)
46 Library Science
48 Mathematics
51 Military Science
52 Physical Science
54 Psychology
56 Public Affairs & Services
58 Social Sciences
61 Interdisciplinary Studies
63 Other Programs of Study
65 Foreign Study Programs
66 Honors Programs
67 Reserved Officer Training (ROTC)
68 Ethnic Studies Programs
69 Women's Studies Programs
70 Other Special Programs

ADMISSIONS
(requirements for entering the schools)

75 Freshman Admission Requirements
76 Transfer Admission Requirements
77 Admission Application Procedures
78 Special Admission Procedures for Minority Students
79 Special Admission Procedures for Adults

HOUSING

80 Dormitory Information
81 Fraternity & Sorority Information
82 Cooperative Housing Information
83 Off-Campus Housing Information
84 Married Student Housing Information

COST AND FINANCIAL AID

85 Single Student Costs (tuition, board and room, etc.)
86 Married Student Costs (including single parents)
87 Part-time Student Costs
88 Types of Financial Aid Available
89 Financial Aid Application Procedures
90 Examples of Financial Aid Received by Students
91 Availability of Part-time Jobs

SERVICES

92 Services for All Students (counseling, tutoring, etc.)
93 Student Services for Special Groups
101 Health Services Available
102 Day Care Facilities Available
103 Library Available
104 Bus Service to School Available
105 Student Parking Available

GENERAL COMPUTER INSTRUCTIONS

WHEN YOU WANT TO:	DO THIS:
Tell the computer you're a new user at the terminal.	Type in HELLO.
Tell the computer you have finished answering.	Strike Return Key.
Skip to the next section of the printout.	Strike Return Key when the terminal pauses.
End a long printout if you don't want the whole thing.	Strike Period and Return Keys when the terminal pauses.
Get help with what to do next.	Type in HELP
Erase a mistake before you strike the Return Key. Your mistake will be ignored, but you'll have to enter your whole message again.	Hold down the Control (Ctrl) Key & strike the letter X.
Stop using the system and there's someone waiting.	Strike Return Key & tell the next user to type in HELLO.
Stop using the system and there's nobody waiting	Type in STOP.

INSTRUCTIONS FOR USING QUEST AT THE COMPUTER TERMINAL

WHEN YOU WANT TO:	TYPE IN:
Begin answering questions.	QUEST
Find out **how many** occupations remain on your list.	HOW MANY
Back up one question to change an answer	BACK UP
Find out what occupational titles and codes are on your **list**. You can end a list by quickly striking the Period and Return keys whenever the terminal pauses. Or you may jump to the next occupational group by striking the Return key when the terminal pauses.	LIST
Find out **why** a particular occupation was left off your occupational list.	WHY NOT (c… …o.)
Change the answers to questions you have already answered.	CHANGE
Put in **QUEST** answers quickly.	BATCH QUEST
Go back to where you were in QUEST if you left it to get some other information.	FINISH

INSTRUCTIONS FOR USING INFO FILES

WHEN YOU WANT TO:	TYPE IN:
Find out what information there is in the computer.	INFO
Get a **description** of job duties, working conditions, hiring requirements, employment prospects, etc. for a certain occupation.	DESC (occ. no.)
Get a **bibliography** of occupational books.	BIB (occ. no.)
See how people **prepare** for an occupation.	PREP (occ. no.)
List **high school courses** that will help in preparing for a field of work (cluster).	PREP (first two digits of occ. no.)
Get the **names of people** for personal discussion about their occupations. (Not available in all areas.)	VISIT (occ. no.)
Get a list of courses, degrees, and schools for a **program** of study and training.	PROG (prog. no.)
Compare the services and costs of **schools**.	SCH (1, 2 or 3 sch. codes)

Example:
SCH 21143, 21001, 21073

SPECIAL NOTES:

You may ask for information from any of these files at any time.

Sometimes the computer terminal may stop for a while and you may think it has finished printing its message to you. Maybe it has and maybe it hasn't. You can tell for sure by looking at the very last thing printed.

If you see a question mark, then the computer has finished its message and is only waiting for you to type something.

If you don't see a question mark, then it hasn't finished and you should wait for it to print the rest of its message before you type in anything else.

'EUREKA' an educational showpiece

By GORDON RADDUE
I-G Staff Writer

SAN PABLO — The Richmond Unified School District's innovative Career Development Center (CDC) and Project EUREKA, the computerized data bank connected with it, is rapidaly becoming an educational show piece, according to a report presented to the district board.

The Richmond high School-based CDC, instructional vice principal Hal Holt, said at last night's meeting,' has gained national and statewide attention and could well become a model for other school districts to follow.

And CDC staff member Leigh Robinson, discussing Project EUREKA, said the career information system would not now be available in California were it not for the Richmond district's strong leadership role in first adopting the system and then helping to adapt it for use throughout the state.

The planning for the CDC began early in the fall of 1973 under the direction of Superintendent of Schools W. W. Snodgrass and Richard Lovette, who since has succeeded Snodgrass.

It was put into operation two years later with the aim of providing school district graduates with saleable skills and pointing them in the direction of employment.

"Our Career Development Center grew out of a desire to develop and implement a program that would satisfy the needs of the majority of our students," said Holt. "We . . . know that our college prep program is a good program; and yet research indicates the number of jobs in the United States requiring a college diploma will fall to 10 percent by 1980.

"We also know," he continued, "the cost of a college education is rising rapidly . . . We know college diplomas are not for everyone, and we are concerned with the vast majority of students who either are not going to college or who need a saleable skill to work their way through further educational training."

Establishment of the program, Holt said, involved surveying national employment trends, examining local community needs and looking into the district's facility capabilities and teacher qualifications. Business and industry advisory committee meetings were held for input to assist in the creation of career clusters which would enable students to determine their areas of specialization and the amount of education and technical training they would pursue.

Three goals were set for the program, namely to provide each student with a high school diploma, the necessary training for college, technical school or special training, and a saleable skill.

Nine career clusters were established, including business, electronics, food service, graphic communications, people care services, plastics technology, security services, transportation services and fashion merchandising.

State-funded Regional Occupational Programs (ROP) also were established to allow county residents to upgrade and learn new job skills. These programs permit adults to attend school as well.

Holt said the CDC is currently offering courses to prepare students to become computer operator trainees and automotive tune-up and repair specialists. A new program recently added is TSPS (Traffic Service Position System), designed to prepare second semester senior students to become telephone operators at the San Pablo office of Pacific Telephone.

According to Holt, the phone company has assured the district that between 80 and 90 percent of those students successfully completely the one-semester program will be employed by Pacific Telephone.

Five other ROP offerings are being added for the 1977-78 school year, including clerk typist, fashion merchandising sales, lab assistant, legal/medical secretary and word processing.

The CDC program has expanded from an original 180 students in 1975 to more than 300 and should continue to grow both in numbers and course offerings, according to Holt.

A parent-student orientation is scheduled for 7:30 p.m. next Thursday night at the CDC and a big attraction is certain to be the Project EUREKA, which Robinson has been championing in workshops throughout the state.

"Basically," said Robinson, "EUREKA is a library of occupational and education information which is up - to - date and localized. The information is stored in the system's computer memory and can be accessed through a computer terminal."

The computerized data bank currently has five files of information: occupational descriptions, a bibliography of occupational books, preparation for occupations, programs of study and training and post-secondary schools. The files are localized and kept up - to - date by EUREKA's own information development staff.

Then there is an access strategy called Quest, which consists of 24 questions covering aptitudes, interests, physical limits, location and earning preference and educational expectations.

Once the user has answered the questions in the EUREKA handbook, he uses the computer terminal to get a list of job titles that fit his answers. The user may type "why not" to learn why a field of interest isn't on the list, "change" to change his or her answers and "list" to get a new list of job titles.

EUREKA enables users to discover which occupations suit their preferences, values and abilities, and which programs of training will best serve their own career development. It provides a factual basis, continuously updated and locally relevant, for personal decision-making, and it frees counselors to aid in the process.

The career information system is modeled after one developed in the state of Oregon. But each state or area has to be responsible for its own data files, said Robinson.

"We have to develop California data to put into the system. That's the costly item," he said.

Although five school districts are using the system, none has developed it to the point Richmond has, said Robinson.

Robinson has given workshops in Southern California, among other places, and he says the people in those areas "can not believe one district is so involved in a system that will be so widespread in California."

Robinson said the computer terminal is being provided to each high school in the district and Helms Junior High for three-week periods and that students are making full use of it.

Lovette gives Robinson much of the credit for the success of the program and expects it to expand steadily.

"We're the first district to make it grow and spread out," said Lovette. "The jobs will be there for the students who qualify for them. We can keep adding new clusters as the number of students in the program increases."

The California Career Information System

LEIGH ROBINSON
Richmond High School
1250 23rd Street
Richmond, CA 94804
(415) 237-8770

JIM STUBBLEFIELD
Diablo Valley College
Pleasant Hill, CA 94523
(415) 685-1230

WHAT IS EUREKA, THE CALIFORNIA CAREER INFORMATION SYSTEM?

Basically, EUREKA is a library of occupational and educational information which is up-to-date and localized. The information is stored in the system's computer memory and can be accessed through a computer terminal.

EUREKA currently has five files of information: occupational descriptions, a bibliography of occupational books, preparation for occupations, programs of study and training, and post-secondary schools. These files are localized and kept up-to-date by EUREKA's own information development staff.

In addition, there is an access strategy called Quest, which consists of twenty-four questions covering aptitudes, interests, physical limits, location and earnings preferences, and educational expectations. Once the user has answered these questions in the handbook, he uses a computer terminal to get a list of job titles that fit his answers. If need be, the user may then type WHY NOT to learn why an occupation of interest is not on the list. He may type CHANGE to change his answers, and he may type LIST to get a new list.

After Quest, the user commonly asks for information about one or more of the occupations on his Quest list, but he may ask for information from any of the five files at any time, even without using Quest.

The occupational description file contains a 300-word description on each of 230 common occupations. It describes job duties, working conditions, and hiring requirements, and it even tells how many people are currently employed in the occupation locally, how much one can expect to earn in that occupation, and whether or not there are favorable employment prospects.

The bibliography file refers the user to sections of selected occupational books which have additional information on the occupation accessed.

The preparation file explains how one commonly prepares for a general field of work or for a certain occupation.

The program file locates desired study and training programs and describes what they entail. They range from apprenticeship and regional occupational programs to college and university programs leading to advanced degrees.

The school file compares up to three post-secondary schools at one time on any of 64 different topics, such as dormitory information, size of freshman classes, types of financial aid available, programs of study offered, and student costs. Public, private, and proprietary schools within California, as well as popular out-of-state schools are included.

All in all, EUREKA enables users to discover which occupations suit their preferences, values, and abilities and which programs of training will best serve their own career development. It provides a factual basis, continuously updated and locally relevant, for personal decision-making, and it frees counselors to aid in the process.

SAMPLE QUEST QUESTIONNAIRE

```
HELLO; PLEASE ENTER YOUR NAME, THEN PUNCH THE 'RETURN' KEY.
?MICHAEL
HELLO MICHAEL,
YOU ARE LOGGED IN TO EUREKA - THE
CALIFORNIA CAREER INFORMATION SYSTEM.
HOW DO YOU WANT TO START?
IF YOU FILLED OUT THE QUESTIONNAIRE IN YOUR HANDBOOK,
        TYPE IN: 'QUEST.'
IF THERE ARE OCCUPATIONS, EDUCATIONAL PROGRAMS,
OR SCHOOLS YOU WANT INFORMATION ABOUT,
        TYPE IN: 'INFO.'
?QUEST
  WE WILL NOW BEGIN.  AS EACH QUESTION IS LISTED, LOOK
TO SEE HOW YOU ANSWERED IT IN YOUR USER'S HANDBOOK,
THEN TYPE IN THE CODE YOU CIRCLED.  DON'T FORGET TO
PUNCH THE 'RETURN' KEY AFTER EACH RESPONSE.
HERE IS YOUR FIRST QUESTION:
   01 LIFTING (YES,NO,CD,DK)
?DK
   02 IMPAIRED VISION (YES,NO)
?NO
   03 DEAFNESS (YES,NO)
?NO
THERE ARE 227  OCCUPATIONS THAT MEET ALL YOUR RESPONSES.
ANY TIME YOU WANT TO KNOW HOW MANY OCCUPATIONS ARE
LEFT ON YOUR LIST, TYPE IN 'HOW MANY'.
   04 REGION (AREA,NW,US)
?US
   05 CITY SIZE (LM,LMSC,SC,SCR,RUR,NP)
?NP
   06 WORKING CONDITIONS (IN,OUT,NP)
?NP
   07 EDUCATION (NO,HS,ONE,TWO,FOUR,ANY)
?ANY
   08 WORKING WITH HANDS (HVG,HFG,HFP,HDK)
?HFG
   09 EYE FOR ACCURACY (CVG,CFG,CFP,CDK)
?CDK
   10 ABILITY WITH WORDS (VVG,VFG,VFP,VDK)
?VVG
   11 ABILITY WITH NUMBERS (NVG,NFG,NFP,NDK)
?NVG
   12 CATCHING ON TO THINGS (GVG,GFG,GFP,GDK)
?GVG
   13 PRECISION WORK (YES,NOT,NP)
?NP
   14 OPERATING EQUIPMENT (YES,NOT,NP)
?HOW MANY
 227  OCCUPATIONS REMAIN.
?NOT
   15 HANDLING MATERIALS (YES,NOT,NP)
?NOT
   16 INTERPRETING FACTS (YES,NOT,NP)
?NP
   17 ORGANIZING AND USING INFORMATION (YES,NOT,NP)
?NOT
   18 COPYING, SORTING, PUTTING THINGS TOGETHER (YES,NOT,NP)
?NP
   19 GIVING COUNSEL (YES,NOT,NP)
?NP
   20 DISCUSSING, BARGAINING (YES,NOT,NP)
?YES
   21 INSTRUCTING, SUPERVISING (YES,NOT,NP)
?YES
```

```
   22 SELLING, PERSUADING (YES,NOT,NP)
?NOT
   23 ASSISTING (YES,NOT,NP)
?YES
   24 BEGINNING WAGE (NI,MIN,500,700,1000,1250)
?HOW MANY
 17   OCCUPATIONS REMAIN.
?NI
THERE ARE 17   OCCUPATIONS THAT CORRESPOND TO THE
ANSWERS YOU GAVE.
'QUEST' LIST FOR MICHAEL

ADMINISTRATIVE OCCUPATIONS: 1100
   1134     HEALTH SERVICE ADMINISTRATORS

BOOKKEEPING-ACCOUNTING OCCS: 1600
   1684     PROGRAMMERS & SYSTEMS ANALYSTS

ENGINEERING & DESIGN OCCUPATIONS: 2300
   2356     ENGINEERING TECHNICIANS

GRAPHIC ARTS OCCUPATIONS: 4700
   4724     COMMERCIAL ARTISTS & DESIGNERS

TRANSPORTATION OCCUPATIONS: 6100
   6126     AIR TRAFFIC CONTROLLERS

HEALTH SERVICE OCCUPATIONS: 8100
   8122     CHIROPRACTORS
   8126     HEALTH THERAPISTS
   8128     SPEECH AND HEARING SPECIALISTS
   8186     COSMETOLOGISTS

SOCIAL SERVICE OCCUPATIONS: 8400
   8414     COUNSELORS
   8416     CASEWORKERS
   8418     PSYCHOLOGISTS
   8428     SOCIAL SERVICE AIDES
   8436     CLERGY

PROTECTIVE SERVICE OCCUPATIONS: 9400
   9436     MILITARY ENLISTED PERSONNEL
   9476     SECURITY GUARDS

ART AND ENTERTAINMENT OCCUPATIONS: 9800
   9842     MODELS

CHECK FOR THE OCCUPATIONS YOU ARE NOW CONSIDERING.
ARE THEY ON THE LIST?  TYPE IN: 'YES' OR 'NO'
?NO
LET'S FIND OUT WHY NOT.
  TYPE IN 'WHY NOT' AND AN OCCUPATION CODE.
  EXAMPLE:  WHY NOT 2674
?WHY NOT 8432
 8432    LAWYERS ELIMINATED BY THE FOLLOWING RESPONSE(S):
ORGANIZING AND USING INFORMATION   17=NOT
YOU CAN CHANGE ANSWERS AND THE LIST BY TYPING IN 'CHANGE'.

?WHY NOT 9414
 9414    LAW ENFORCEMENT OFFICERS
 ELIMINATED BY THE FOLLOWING RESPONSE(S):
ORGANIZING AND USING INFORMATION   17=NOT
YOU CAN CHANGE ANSWERS AND THE LIST BY TYPING IN 'CHANGE'.
```

SAMPLE OCCUPATIONAL DESCRIPTION

?DESC9414
WHICH AREA ARE YOU IN:
SAN FRANCISCO BAY AREA? TYPE IN: SF
OTHER AREA? TYPE IN: OTHER
?OTHER

9414 LAW ENFORCEMENT OFFICERS

LAW ENFORCEMENT OFFICERS HAVE THE RESPONSIBILITY OF PROTECTING LIFE, PROPERTY AND PRESERVING THE PEACE. THEY PREVENT VIOLATIONS OF THE LAW, INVESTIGATE COMPLAINTS AND CRIMES, APPREHEND VIOLATORS, AND ASSIST IN PROSECUTIONS IN ORDER TO PRESERVE LAW AND ORDER. OFFICERS ALSO PREPARE AND SUBMIT REPORTS OF THEIR ACTIVITIES AND TESTIFY IN COURT. SPECIALTIES: DEPUTY, SHERIFF, SERGEANT, DETECTIVE, CHIEF, AND PARKING CONTROL ATTENDANT. WORK SETTING: INDOORS & OUTDOORS, WORKING IRREGULAR HOURS AS WELL AS HOLIDAY AND WEEKEND DUTY. APTITUDES: ABILITY TO MAKE QUICK JUDGMENTS AND PERFORM WELL UNDER STRESS, ABILITY TO RELATE & CONVERSE WELL WITH PEOPLE. HIRING PRACTICES: FOR SOME EMPLOYERS, COMPETITIVE EXAMS WHICH TEST FOR APTITUDES, ATTITUDES, STRENGTH & GENERAL HEALTH MUST BE PASSED; EDUCATION BEYOND HIGH SCHOOL IS INCREASINGLY PREFERRED. APPLICANTS WITH COURT CONVICTIONS ARE OFTEN DISQUALIFIED. CANDIDATES MUST ALSO MEET AGE REQUIREMENTS. EMPLOYERS: CITY, COUNTY, STATE, AND FEDERAL GOVERNMENTS. TRAINING: ALL RECEIVE ON-THE-JOB INSTRUCTION AND ATTEND THE POLICE ACADEMY; INSTITUTIONAL TRAINING OFFERED AT MOST COMMUNITY COLLEGES (SEE PREP 9414 & PROG 567).

---CURRENT EMPLOYMENT: ABOUT 63,000 IN CALIF. WITH LAW ENFORCEMENT OFFICERS FAIRLY EVENLY DISTRIBUTED WITH POPULATION. THIS FIGURE INCLUDES POLICEMEN, SHERIFF DEPUTIES, DETECTIVES, BAILIFFS, MARSHALLS AND CONSTABLES. WAGES: THE AVERAGE ENTRY RATE FOR LAW ENFORCEMENT OFFICERS IS $850/MO., MAXIMUM IS $19,000/YR. OUTLOOK: BALANCE TO SLIGHT SURPLUS. OUTLOOK DEPENDS ON THE EXPANSION OF CURRENT PROTECTIVE SERVICE FORCES, & UPON PUBLIC FINANCIAL SUPPORT. STUDIES PREDICT MODERATE EMPLOYMENT GROWTH. PRESENTLY, THE SUPPLY OF APPLICANTS (ALTHOUGH MANY ARE UNQUALIFIED) CONTINUES TO EXCEED DEMAND, PARTICULARLY IN POPULATION CENTERS. HIRING REQUIREMENTS ARE HIGH AND COMPETITION IS KEEN. COMPETENT PEOPLE SHOULD FIND OPPORTUNITIES GOOD; INSTITUTIONAL TRAINING IS HELPFUL BUT DOES NOT GUARANTEE ONE A JOB. OTHER OPPORTUNITIES ARE OPENING UP IN RELATED AREAS SUCH AS PRIVATE SECURITY & INVESTIGATING FIRMS. QUALIFIED MINORITY GROUP MEMBERS SHOULD FIND GOOD JOB PROSPECTS; SOME OPPORTUNITIES FOR WOMEN IN CERTAIN SPECIALTIES.

FOR WAYS TO PREPARE, TYPE IN: PREP 9414
FOR BOOKS, TYPE IN: BIB 9414
CIS/CALIFORNIA/MAY 9 1977

SAMPLE OF PREPARATION FILE

?PREP9414
 9414 LAW ENFORCEMENT OFFICERS
---SKILLS: WORKING KNOWLEDGE OF POLICE METHODS, PROCEDURES AND PERTINENT LAWS & ORDINANCES. ABILITY TO USE POLICE EQUIPMENT & TECHNIQUES; TO CONDUCT INVESTIGATIONS, COLLECT, EVALUATE & ANALYZE FACTS AND TO DRAW CORRECT CONCLUSIONS; TO UNDERSTAND & FOLLOW ORAL & WRITTEN ORDERS; TO DEAL EFFECTIVELY WITH THE PUBLIC AND TO WRITE REPORTS.
---PREPARATION: CITY POLICE OFFICERS MUST BE 21, HAVE A HIGH SCHOOL OR GED DEGREE, BE ABLE TO WRITE & SPELL & HAVE GOOD HEALTH, A DRIVER'S LICENSE & GOOD MORAL CHARACTER. HOWEVER, MISDEMEANOR CONVICTIONS DO NOT ABSOLUTELY DISQUALIFY ANYONE, INSTEAD EACH APPLICANT IS EXAMINED ON AN INDIVIDUAL BASIS. STATE POLICE OFFICERS HAVE THE SAME QUALIFICATIONS PLUS CORRECTED 20/20 VISION & THE ABILITY TO PASS A WRITTEN EXAM OF GENERAL INFORMATION, SPELLING & APPLIED MATH. ALTHOUGH AN INCREASING NUMBER OF ENTRY LEVEL POLICE OFFICERS DO HAVE SOME COLLEGE TRAINING, THIS IS NOT REQUIRED OR NECESSARILY PREFERRED. MORE THAN HIGHER EDUCATION, SUPERVISORS EMPHASIZE A PERSONALITY THAT CAN WITHSTAND THE STRESS & DEMANDS OF THE JOB. ONE CAN PREPARE TO BE A CITY POLICE OFFICER BY JOINING EXPLORER SCOUTS AND BECOMING INVOLVED IN LOCAL SERVICE PROJECTS. AT AGE 20, A PERSON CAN WORK FOR A YEAR AS A COMMUNITY SERVICE OFFICER, ASSISTING THE PUBLIC UNARMED, WITH THE OPTION OF BEING CONSIDERED AS A RECRUIT AT THE END OF THE YEAR. INTERESTED STATE POLICE APPLICANTS AT AGE 18 CAN WORK AS CADETS, PATROLLING PUBLIC RECREATION AREAS OR WORKING AS LEGISLATIVE SECURITY GUARDS. ADVANCEMENT TO OFFICERS IS NOT GUARANTEED BUT THEY WILL BE CONSIDERED. COMMUNITY COLLEGES ALSO OFFER TRAINING. (FOR RELATED EDUCATIONAL PROGRAM SEE LAW ENFORCEMENT, PRC 567.) PROMOTION IS BASED ON PERFORMANCE AND FURTHER EDUC ION. A FEDERAL PROGRAM FINANCES TUITION FOR FULL TIME OFFICERS. CITY RECRUITS ADVANCE TO PATROLMEN & STATE RECRUITS TO TROOPERS. FURTHER PROMOTION IS TO DETECTIVE WORK OR SUPERVISORY LEVELS. FEDERAL JOBS OPEN FOR LAW ENFORCEMENT OFFICERS INCLUDE: TREASURY AGENTS, NARCOTICS WORK, UNDERCOVER AGENTS, BORDER PATROL, CUSTOMS AGENTS.

WHAT NEXT?
?PREP94
 9400 PROTECTIVE SERVICE OCCUPATIONS:
PERSONS IN THE PROTECTIVE SERVICE OCCUPATIONS ARE RESPONSIBLE FOR GUARDING ALL TYPES OF PROPERTY, AND FOR THE SAFETY OF PEOPLE AS ESTABLISHED BY PUBLIC LAWS. CAREER PREPARATION COULD INCLUDE THE FOLLOWING HIGH SCHOOL SUBJECTS:

ARITHMETIC	MECHANICS
AMERICAN GOVERNMENT & HISTORY	PHYSICAL EDUCATION
BUSINESS LAW	PSYCHOLOGY
DRIVERS TRAINING	SPEECH

STUDENTS SHOULD ALSO CONSIDER POST-SECONDARY AND/OR ON-THE-JOB TRAINING.

YOU CAN LEARN MORE BY LOOKING AT THE DESCRIPTIONS FOR THESE OCCUPATIONS:

9414 LAW ENFORCEMENT OFFICERS
9426 FIRE FIGHTERS
9436 MILITARY ENLISTED PERSONNEL
9476 SECURITY GUARDS

SAMPLE OF PROGRAM FILE AND HELP STATEMENT

```
 PROG567
567    LAW ENFORCEMENT

     SEVERAL SCHOOLS OFFER PROGRAMS INTENDING TO PREPARE
PEOPLE TO WORK IN SOME AREA OF LAW ENFORCEMENT IN POLICE
DEPARTMENTS, SHERIFFS' OFFICES, PRIVATE INVESTIGATION,
SECURITY, ETC.  THE PROGRAMS ALSO INTEND TO PROVIDE FURTHER
TRAINING FOR PERSONS ALREADY ENGAGED IN LAW ENFORCEMENT OC-
CUPATIONS.  PROGRAMS VARY FROM 2-YEAR ASSOCIATE DEGREE PRO-
GRAMS TO BACHELOR'S DEGREE PROGRAMS AT 4-YEAR SCHOOLS.  MANY
COMMUNITY COLLEGES ALSO OFFER THE FIRST 2 YEARS OF DEGREE
REQUIREMENTS FOR THE 4-YEAR SCHOOLS' LAW ENFORCEMENT PRO-
GRAMS WHICH CAN THEN BE TRANSFERRED TO THOSE SCHOOLS FOR
DEGREE COMPLETION.
     MOST PROGRAMS REQUIRE THAT ENTERING STUDENTS NOT HAVE
POLICE RECORDS OR FELONY CONVICTIONS & REQUIRE EACH APPLI-
CANT TO BE FINGERPRINTED FROM WHICH A PERSONAL INVESTIGATION
IS COMPLETED PRIOR TO ACCEPTANCE INTO PROGRAM.
     COURSEWORK: USUALLY INCLUDES AT LEAST THE FOLLOWING:
        CRIMINAL EVIDENCE   CRIMINAL INVESTIGATION
        CRIMINAL LAW        CRIME & DELINQUENCY
        FIRST AID           PATROL & TRAFFIC PROCEDURES
        PERSONAL DEFENSE    ADMIN. OF CRIMINAL JUSTICE
TYPING, HUMAN RELATIONS & SIMILAR RELATED COURSES ARE
USUALLY REQUIRED.  MANY PROGRAMS ALLOW STUDENTS TO
GAIN PRACTICAL EXPERIENCE BY WORKING FOR CAMPUS SECURITY
OR THROUGH FIELD PLACEMENT WITH LOCAL LAW ENFORCEMENT AGEN-
CIES.  CONSULT SCHOOL CATALOGS FOR A MORE COMPLETE
DESCRIPTION OF CURRICULUM.
     RELATED OCCUPATIONS: DESC 9414 LAW ENFORCEMENT OF-
FICERS, DESC 9476 SECURITY GUARDS.
     RELATED PROGRAMS:  568 CORRECTIONS;  421 LAW.


DO YOU WANT A LIST OF SCHOOLS? (TYPE IN 'YES' OR 'NO').
?NO
WHAT NEXT?
?HELP
SORRY YOU ARE HAVING TROUBLE.

YOU CAN GET ANY OF THE FOLLOWING:
OCCUPATIONAL INFORMATION:
     TYPE IN 'INFO' AND A 4-DIGIT OCCUPATION CODE.
LIST OF EDUCATION AND TRAINING PROGRAMS:
     TYPE IN 'PROG' AND A 3-DIGIT PROGRAM CODE
DATA ABOUT SERVICES AND COSTS OF SCHOOLS:
     TYPE IN 'SCH'

IF YOU ARE USING QUEST, YOU CAN TYPE IN:
     HOW MANY
     FINISH
     LIST
     WHY NOT (PLUS AN OCCUPATION NUMBER)
     BACK UP
     CHANGE
     START OVER
FOR MORE DETAILS, SEE PAGES 24-25 OF YOUR USER'S HANDBOOK.

IF YOU WANT TO STOP, TYPE IN: 'STOP'.
?
```

SAMPLE OF SCHOOL INFORMATION FILE

```
NOW, TYPE IN THE SCHOOLS.
    ENTER 'SCH' AND 1, 2, OR 3 SCHOOL CODES.
EXAMPLE:  SCH 21143,21001,21024

?SCH21520,21346,02138
WHAT DO YOU WANT TO KNOW ABOUT THE SCHOOLS?
    TYPE IN THE SCHOOL TOPICS.  EXAMPLE: 1-5, 21, 71, 85
    SCHOOL TOPIC CODES ARE ON PAGE 23 OF YOUR HANDBOOK.
?1-2,85
```

	CALIF. POLY-TECHNIC STATE UNIVERSITY POMONA 3801 W. TEMPLE AVENUE POMONA CA 91769	GAVILAN COLLEGE 5055 SANTA TERESA BLVD. GILROY, CALIF. 95020	HARVARD UNIVERSITY CAMBRIDGE, MASS. 02138
01 GENERAL INFORMATION			
TYPE OF SCHOOL	4 YEAR PUBLIC UNIVERSITY-COED	2-YR PUBLIC CO-ED COMMUNITY COLLEGE	4-YR. PRIVATE NON-SECTARIAN UNIVERSITY AND COLLEGE FOR MEN. (HAS BEEN AFFILIATED WITH RADCLIFFE WHICH HAS 1,900 UNDERGRADUATE WOMEN
GRADUATE DEGREES	YES	NO	EXTENSIVE
SCHEDULE OF CLASSES	QUARTER SYSTEM MOSTLY DAY	QUARTER	SEMESTER
CORRESPONDENCE COURSES		NO	NO
UNDERGRAD SUMMER CURRICULUM	FULL ACAD. QT. & SUMMER SESS.	ONE 6-WEEK SESSION	YES
LOCATION OF SCHOOL	POMONA	GILROY, CALIF.	CAMBRIDGE, MASS
POPULATION OF NEAREST CITY OR TOWN	87,900	15,000	100,000
CAMPUS TO CITY CENTER	5 MILES	1 MILE	3 MILES
MILES TO SAN FRANCISCO OR NEAREST LARGE CITY	L.A.-40 MINUTES	75 MILES TO SF	BOSTON-4 MI.
02 ENROLLMENT INFORMATION			WITH RADCLIFFE
TOTAL (EXCL ADULT ED)	10,021	1,142	6,600
WOMEN	3,204	517	1,900
MEN	6,817	625	4,700
FULL-TIME UNDERGRADS.	7,708	800	6,600
PART-TIME UNDERGRADS.	2,313	342	-0-
OUT-OF-STATE STUDENTS	6%	FEW	80%
NEW STUDENTS (FROSH)	1,772	400	2,175
NEW WOMEN	619	200	400
NEW MEN	1,153	200	1,175
TRANSFERS	WELCOME		
FOREIGN			
85 SINGLE STUDENT COSTS			
TUITION AND FEES	$200	$25	$4,100
BOARD, ROOM, EXPENSES	$2,030	$1,500-3,000	$3,200
BOOKS & SUPPLIES	$180		
TOTAL COSTS	$2,410	$1,525-5,000	$7,300

EUREKA, The California Career Information System May, 1977

Estimated direct costs for school with 1200 students

	Year 1 (1977-78)	Year 2 (1978-79)
Terminal	689[1] - 405[2]	Ø - 405
Maintenance	150 - Ø	150 - Ø
Paper	72	72
Lease line modem[3]	250 - 135	Ø - 135
Telephone lease line[4]	208	168
Computer port[5]	1,620	1,620
EUREKA software[6]	1,000	600
Total	3,989 - 3,440	2,610 - 3,000
Estimated cost per user per year (total ÷ 800[7])	4.99 - 4.30	3.26 - 3.75

1. Outright purchase of teletype terminal, KSR-33, rebuilt as new, 10 characters per second (cps). For faster (30 cps) and quieter Decwriter terminal, add $1,300 to first year costs.

2. Figures for leasing equipment, if different from other figures given, are shown on the right.

3. New modem, necessary to transmit data over telephone line.

4. Charges vary with distance; within the same exchange, normal charge is $14 per month plus $40 installation.

5. Based on current charges for timesharing at Lawrence Hall of Science, $180 per month x 9 months.

6. EUREKA software includes user handbooks, implementation handbook, updates at least every 8 weeks, inservice training, and membership in the EUREKA cooperative. Institutions electing to become demonstration sites pay a fee of $1,000 for full use of the system through June, 1978. After the demonstration period, the fee will be based on the number of estimated users. 75¢ per estimated user for the first 3000 and 50¢ for each additional user. Estimate for schools is based on 2/3 of ADA.

7. In a school of 1200 students, an estimated 2/3 or 800 would be likely to use the system. Each user generally accesses EUREKA 2 to 3 times per year for 20 to 30 minutes each time.

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
ADMINISTRATION BUILDING
1619 N STREET, P.O. BOX 2271
SACRAMENTO, CALIFORNIA 95810
Tel: 454-8335
JOSEPH H. LYNN
Superintendent

December 1, 1976

Mr. Leigh Robinson
Richmond High School
1250 - 23rd Street
Richmond, CA, 94804

Dear Leigh:

On November 16, 1976, four members of our school district toured your project the California Career Information System "EUREKA" at Richmond High School. This was an extremely informative and exciting experience for our people. Now we will begin to establish the framework of a Vocational Guidance Program for this district.

Thank you so much for your hospitality and welcome. The information that was brought back will certainly help us for a long time to come.

Sincerely,

Harold Stainbrook

Harold Stainbrook
Director
Vocational Education

HS:pm

LANEY COLLEGE

900 FALLON STREET • OAKLAND, CALIFORNIA 94607
(415) 834-5740

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Hal Michaels
Mrs. Constance L. Ormond

December 10, 1976

Mr. Leigh Robinson
Richmond High School District
1250 23rd Street
Richmond, CA 94804

Dear Mr. Robinson:

Giving of your time to participate on a panel at the California Community College Association Conference was appreciated by all of those who attended the Computer Based Career Information and Guidance Systems Workshop.

From the comments that were recorded on the evaluation forms, they were very commendable. We thank you for making our conference a success.

Sincerely,

Carl Mack, President
C.C.C.C.A.

CM/pw

PERALTA COMMUNITY COLLEGE DISTRICT • THOMAS W. FRYER, JR., CHANCELLOR AND DISTRICT SUPERINTENDENT

COLLEGE OF ALAMEDA • LANEY COLLEGE • MERRITT COLLEGE • FREMONT-NEWARK COLLEGE • NORTH PERALTA COMMUNITY COLLEGE
EAST BAY SKILLS CENTER

Apostolic Academy
Christian School

P. O. BOX 699
4892 SAN PABLO DAM ROAD
EL SOBRANTE, CALIFORNIA 94803
PHONE 223-5960

B. J. ROBISON
ADMINISTRATOR

February 8, 1977

To Whom It May Concern:

This past week has been an exciting one for us here at the Apostolic Academy. We have had the opportunity to use the computer-delivered career information system known as EUREKA. The Richmond School District provided us with computer equipment and directions for accessing the system.

Our students found EUREKA easy to use, interesting, and helpful. Most of them haven't thought very much about what they will be doing once they leave high school. Careers seem to be a long way off. That is why the Quest part of EUREKA was so helpful to focus their attention on occupations that fit their interests and abilities. When students have thought about their futures, they become motivated to do well in school, and that is what we want. The Quest lists and the up-to-date occupational and educational information with the students used all helped to get them thinking about their futures.

We are happy to see that EUREKA is now available in California. We would like to use it again becuase we feel that it serves an important need in our school.

Sincerely yours,

B. J. Robison

B. J. Robison

/kd

NORTH SANTA CLARA COUNTY
REGIONAL OCCUPATIONAL PROGRAM
A PROGRAM OF THE SANTA CLARA COUNTY SUPERINTENDENT OF SCHOOLS

MOUNTAIN VIEW/LOS ALTOS DISTRICT
FREMONT DISTRICT
PALO ALTO DISTRICT

PO BOX F
589 W FREMONT AVE SUNNYVALE, CA 94087
PHONE (408) 245-2360

March 22, 1977

Mr. Leigh Robinson
Richmond High School
1250-23rd
Richmond, CA 94804

Dear Leigh:

My sincere thanks for participating in our Counselor Inservice Workshop.

As you know our purpose for the workshop was to update our counselors and career center staff regarding ROP and to make them aware of the EUREKA Project.

Without a doubt your talk was very timely and informative especially since Palo Alto has installed the system and Mtn.View/Los Altos District is looking for a computerized informational system.

My only regret is that there was not enough time for people to try out the computer while at Palo Alto.

I was pleased to find out that in the near future that information on the ROP programs will be part of the informational system.

Again, many thanks for your time and effort. I know you have a very schedule; therefore, it was extra special having you as one of our workshop speakers.

In appreciation,

Barbara K. Grimm
District Consultant

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY RECRUITING COMMAND
FORT SHERIDAN, ILLINOIS 60037

USARCASP-E

7 April 1977

Mr. Leigh Robinson
Administrative Director
The California CIS
Richmond High School
Richmond, CA 94804

Dear Mr. Robinson:

Let me say in writing how much we appreciated your time and interest on Thursday, 31 March 1977, in discussing and demonstrating the CIS/Eureka program. The dedication and enthusiasm you show contributes much to a visitor's interests. The general goals of the program are shared by many, including Mr. Laureyns and me.

I feel the CIS program has potential value for many youth. Nevertheless, I hope it will eventually be able to incorporate other concepts such as offered by SEARCH or that SEARCH will be able to find a way to use the CIS approach in some of its career decision making class learning experiences. The programs appear to be compatible, and both should help to meet the needs of youth.

Thanks again for sharing your busy and valuable time with us. We enjoyed it and we learned. It was also good to see students using computers in the learning resource center, and in the classroom for that specific instruction.

Sincerely,

Hartley B. Campbell

Hartley B. Campbell, Ed.D.
Educator Program Coordinator
Education Liaison Division

cf/Gerard Laureyns
US Army WRRC
Ft. Baker, CA

Project EUREKA Questionnaire

You can help us to improve EUREKA by answering these few questions after you have used the system:

	Please circle your answer				
What grade are you in?	9	10	11	12	
About how much time (in minutes) did you spend using EUREKA at the computer terminal?	10	20	30	40	50
Did you have an occupation in mind before using EUREKA?	yes	no			
Now that you have used EUREKA, do you have any better idea about what you'll do when you leave high school?	yes	no			
How easy were EUREKA's instructions to understand?	Very	Fairly	Not at all		
How easy was EUREKA to read?	Very	Fairly	Not at all		
How interesting was EUREKA to you?	Very	Fairly	Not at all		
How helpful was EUREKA to you?	Very	Fairly	Not at all		

* * * * * * * * * * * * * * * * *

Please rate each part of EUREKA by circling one answer at the right.

QUEST	Great	Fair	Poor	Did Not Use
Occupational Descriptions	Great	Fair	Poor	Did Not Use
Bibliography	Great	Fair	Poor	Did Not Use
Preparation	Great	Fair	Poor	Did Not Use
Programs of Study and Courses	Great	Fair	Poor	Did Not Use
Schools	Great	Fair	Poor	Did Not Use

Any comments?_____

_____

APPENDIX I

Richmond Unified School District
Richmond, CA 94804

PROJECT EUREKA

Evaluation Report

By:

Donald Mayall
Career & Employment Analysis
Menlo Park, CA 94025

June 1977

INTRODUCTION

Project Eureka, a computerized career information system based upon a model developed at the University of Oregon*, was installed at the six high schools of the Richmond Unified School District (RUSD) in the spring of 1977, as part of a Vocational Education Act, Part D, funded exemplary project.

The purpose of the project was to provide up-to-date career guidance information to high school students and counselors, using remote key terminals in classrooms to access a data base of occupational information stored in a computer. The data base consisted of the following:

1. QUEST, an interactive computer access strategy designed to narrow the range of occupational goals based upon the users vocational interests, preferences, and self-assessed abilities.
2. Job Descriptions of 231 occupations, including pay scales and employment outlook.
3. Preparation necessary to enter these occupations.
4. Programs of training and study relating to these occupations.
5. Information on post-secondary schools and colleges.
6. A bibliography of additional sources of information.

In accordance with standard procedures for demonstration projects, evaluative data was collected from project participants and clients. The following is an analysis of this data prepared by a consultant under contract to the RUSD.

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*This system is described in detail in McKinlay, Bruce, Developing a Career Information System, University of Oregon, 1974.

EVALUATION CRITERIA

Project Eureka is, in essence, a data base consisting of five sets of files, and means of accessing and delivering this data. In short, it is an information system. Criteria for evaluating an information must take user need as their point of departure. Was the information system used? Did the system meet the user's needs, in terms of detail and coverage desired? Was the system what it seemed to be? In other words, was the data base accurate? The foregoing questions provide the framework for evaluating an information system.

In the case of Project Eureka, two sets of users may be identified; students and counselors. Students are ultimate users, but counselors, acting as intermediaries between students and many information sources, also are properly regarded as users.*

Method of Approach

Sourcesof data for answering the evaluative questions were:

1. A questionnaire completed by student users of Project Eureka in each of the RUSD high schools.
2. A questionnaire completed by counselors in each of the high schools.
3. A review of the data files and comparison with source documents.
4. Discussions with project staff.
5. Attendance at Project Eureka consortium meetings from November 1976, through May 1977.
6. Attendance at demonstrations of Project Eureka to staff of other schools.

Implementation of the Project

A number of technical problems were encountered by the project staff in the course of implementing Project Eureka, notably the lack of a compatible

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*A detailed treatment of the evaluation of information systems may be found in Thal-Larsen, Margaret, Requirements and Designs of a Labor Market Information System for a Large Metropolitan Area, University of California, Berkeley, 1972.

computer program. As a consequence, the computer terminals were available for an average of 3 weeks each at 5 of the six Richmond area high schools. This meant that only a limited number of students had the opportunity to use the system. Some counselors also had so little experience with the system that they were reluctant to offer judgments of the project. For these reasons, the evaluative comments in the following section should be regarded very tentatively since they are based upon a small sample of students, and the counselors' experience with the system was not only very limited, but also included the frustrations of start-up problems; machine failures, typographical errors, and the like. A fair evaluation of the system will require a much longer period of observation, and experience with an error-free software.

Student Ratings

The Eureka system was used by 690 students in the course of the study period for an average of 22 minutes at the terminal per student. Of these, 330 completed evaluation forms. Eighty percent used the QUEST files, and over 90 percent used the occupational description files. The preparation file was accessed by 84 percent of the users. Other files were used less often. The program files were used by 57 percent, the schools files by 53 percent, and the bibliography files by 40 percent of the student users.

The occupational descriptions got the highest ratings, with 83 percent of users reporting them to be "great." The information on how to prepare for chosen occupations was ranked "great" by 70 percent of the users, while programs of training and study were given a high mark by 75 percent of users. QUEST and the files of information on schools were rated high by about half of those who used it.

More than 80 percent of student users found the system interesting and easy to read, 69 percent found the instructions very easy to understand.

Overall, 60 percent of student users rated the system very helpful, and 77 percent said that they had a better idea of what they would do after high school after using the system.

Counselor Ratings

The Project Eureka system was rated by 18 counselors who worked with it during the study period. In most cases, their contacts with the system were limited to a three-week period when the terminals were available at their school. Counselors, however, represent sophisticated system users. Since they are accustomed to directing students in information search, they are familiar with a variety of sources of career information and strategies for accessing information. Counselors were asked to rate the importance of each of six occupational topics in counseling; career goals, programs of training and study, school information, job descriptions, pay scales, and employment outlook. They were then asked what sources they used to get information on these topics. Then they were asked to compare Eureka with these other sources. Additionally, they were asked to compare QUEST with other measures of vocational interest. Following is a summary of the couselor responses.

Career goals were considered the most important occupational topic in counseling. Eight out of 10 counselors rated it as very important. Among the tools used to elicit career goals were the Strong Vocational Interest Check List, The Kuder Preference Test, and JOB-O. More than 80 percent of counselors reported that QUEST was superior to both JOB-O and Kuder. Opinion was divided on the Strong test. About 10 percent thought Strong superior to QUEST, and 70 percent thought QUEST superior to Strong. Several commented that Strong and QUEST were not addressed to the same issues, and, hence, not substitutable.

Sixty-seven percent of the counselors thought information on programs of training and study was important, 57 percent thought that Eureka was better

than other sources of information, but 29 percent thought that Eureka was inferior to other sources. This may be more of a reflection on the data base than the concept, since only a fraction of the applicable program data for California had been entered into the computer files. Several counselors specifically mentioned the need for more California program data.

Sixty percent of counselors thought information on schools important and all thought the Eureka data access superior to the various college guides that they had been using.

About half of the counselors said that job descriptions were very important, 30 percent fairly important, and 20 percent not very important. Most had used the Occupational Outlook Handbook or the Dictionary of Occupational Titles as a source of this information in the past. Sixty-two percent preferred the Eureka system, 15 percent preferred these other sources, while 23 percent considered them equivalent.

Employment outlook was considered very important by slightly less than half of the counselors, and important by 40 percent. Sixty-two percent thought Eureka better than other sources, but 23 percent found Eureka less satisfactory than sources such as the Occupational Outlook Handbook, which some liked for its comprehensiveness.

Opinion was divided on the value of pay rate information. The percentage of counselors that rated it very important, 38, was equal to the number that did not think it important. Despite this disagreement on its value, 92 percent thought Eureka superior to other sources of wage data.

COUNSELORS' COMMENTS ON THE SYSTEM

Some of the things that counselors liked about the system were the currency of the information, the ease with which students could use it, the fact that it was "self-directing, that it engaged students' attention, the quickness of response, the volume of occupations, and the capability for

storage and updating information. One counselor remarked, "I think Eureka is fantastic. No counselor can have as much information or dispense it as quickly."

Counselor dislikes partly relate to system failures and partly to the data base available at the time of the study. There were frequent problems with keeping the terminals operational in the test period. Only a limited amount of California school or program information was in the files, and this was regarded as a distinct drawback. Counselors also wished that they had had more time to familiarize themselves with the system and to prepare students in its use.

DATA FILES

The basic model of the CIS was obtained from the University of Oregon in the form of computer tapes. A data base of California information was assembled and entered in place of the Oregon data. The occupational structure was not changed, however. Since the Oregon labor market is dominated by wood products industries, this resulted in the overrepresentation of wood processing occupations which are not relevant in the San Francisco Bay Area labor market in which the Richmond schools are located.

The development of "localized" data bases was done by staff of various local school districts who were members of a group known as the Bay Area Computer Educators (BACE). These development efforts were done on a voluntary basis with the understanding that localized data tapes were to be made available to their school districts. An unfor nate consequence of this volunteer effort was that some data components were slow in preparation, and other were less than complete.

The job descriptions and outlook files were developed by staff at the Richmond Unified School District. All Oregon job descriptions were reviewed

and compared with appropriate California Occupational Guides. Current employment estimates were taken from California Manpower, 1975-1980. Wage data was taken from Occupational Guides, the California State Personnel Board Salary Surveys, and the Bureau of Labor Statistics Wage surveys.

Program files were based upon Inventory of Academic and Vocational Programs, Post Secondary Education Commission of California, 1976. School Information was based upon responses to questionnaires sent to 85 schools and colleges. Data actually entered in the files during the test period covered only a fraction of the schools and colleges in the State.

Information for the preparation files was obtained from California Occupational Guides, the California Apprenticeship Information Guide, and information obtained from State and Federal licensing agencies. Much of this data was also not in the computer files during the test period, however.